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ANTE-NATAL SUPERVISION.[1]

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DEVELOPMENT in the art of obstetrics in recent years has been mainly in the direction of ante-natal supervision.

At the Royal Hospital for Women, Paddington, a pre-maternity out-patient clinic was started in 1912, on one day in each week. From August to December of that year the total number of patients was eighty-seven. Last year's total was 1,094 and arrangements are being made to extend the department by holding the Clinic twice in each week. In the Indoor Pre-maternity Department four hundred and twenty-seven women were admitted in 1923. Many of these patients, being abnormal, are sent in for continuous observation from the Outdoor Department and from the Admission Ward of the Hospital. This goes to show that the women themselves appreciate the benefits of such examination.

[1] Read at a meeting of the New South Wales Branch of the British Medical Association on May 9, 1924.

An interesting fact was brought out by Dr. J. C. Windeyer in his paper at the last Congress.(1) In analysing the results at the hospital in the treatment of eclampsia for a period of seven and a half years he found that there were six hundred and fifteen patients admitted for treatment, suffering from albuminuria of pregnancy. Out of this number only seven developed eclamptic convulsions. The disease was mild in character and all seven recovered.

From my own experience in the labour ward the desperate complications of pregnancy are met with, chiefly in those patients who are sent in directly from outside and in whom no ante-natal examination has been made.

Pre-maternity examination and the early diagnosis of abnormalities play an important part in the teaching of obstetrics at the University of Sydney. The students are required to attend tutorial classes for three weeks before coming into residence. In these classes practical instruction is given in all branches of ante-natal examination.

The precise object of this study is the diagnosis of abnormalities of the pregnant state before labour begins. If we know beforehand that the passenger is too big for the passages, we can deliberately design our treatment to give both mother and babe the best chance of living when gestation has run its course.

When labour has begun, it is a matter of considerable difficulty, in fact in some cases it is an impossibility, to make an accurate diagnosis of presentation and position or to estimate any disproportion between fœtal head and maternal pelvis.

After the thirty-sixth week and before the uterine muscle has begun to contract and retract these points can be settled readily by abdominal palpation. Again, if we add to this information a record of the pelvic measurements and a routine weekly examination of the urine for the last eight weeks in *multiparæ* and for the last twelve weeks in *primiparæ*, not many of our difficult confinements are likely to take us unawares.

I now propose to describe in detail the method of examination which we have adopted at the Royal Hospital for Women, Paddington, and upon which we base our individual treatment.

The examination consists of: (i.) General examination of the patient; (ii.) abdominal palpation and auscultation of the fœtal heart; (iii.) external pelvimetry; (iv.) internal pelvic examination.

General Examination of the Patient.

A general examination includes urine testing and a blood pressure reading. Particular heed is taken of any skeletal deformity such as spinal curvature, a shortened lower extremity or any asymmetry in the contour of the pelvis. Pendulous abdomen or separation of the recti are noted as well as any varicose veins, septic foci or œdema of the lower limbs and any stigmata of constitutional disease.

Abdominal Palpation.

Abdominal palpation plays a very important part in the examination. It enables us to diagnose malpresentations or faulty positions early enough to correct them by simple manipulation.

The examiner sits facing the patient on her left side. After a general palpation of the periphery of the abdomen to exclude any tumours which might obstruct labour, the sides of the uterus are demonstrated. Its shape and any obliquity or unusual breadth of the body are noted. The height of the fundus is then marked and the probable date of labour checked with the patient's statement of the period of amenorrhœa. The next step is to palpate the uterus itself. In order to do this one hand steadies it and displaces the fœtus by moderate steady pressure against the other examining hand. By a series of rapid light dips of the fingers of this hand contact is made against the fœtal body and its contour outlined. The first query is: What part occupies the fundus? The breech is distinguishd from the head by its blunter shape and its softer consistency. Again in most cases the groove between thigh and trunk can be made out as a narrowing ravine, terminating in the groin. A demonstration of the thigh leads us to recognize the position of the back with its smooth unbroken surface terminating in the anterior shoulder. It is easy to be sure of the back, when it is lying anteriorly. When it is looking posteriorly it is slightly more difficult to identify, but here again the groove of the groin and the prominence of the anterior shoulder as well as the position of the fœtal limbs help to fix its position. It follows that when the back is demonstrated, the limbs are found on the opposite side of the uterus. Lastly, the head is palpated and the position of occiput and sinciput are made out. To the examining hand the outline of the sinciput appears to form the arc of a larger circle than in the case of the occiput.

The examiner now turns to face the patient's feet. In this position it is easy to make out the extent of engagement of the head, whether it is fixed in the brim or still floating, also the degree of flexion of the head and in which diameter of the pelvis it lies. When the head is floating its capacity to enter the pelvis is tested by an abdominal grip, that is by grasping the head above the sinciput and occiput with fingers and thumb of the right hand and pressing the head backward and downward into the pelvis. Any marked over-riding of the parietal region of the fœtal skull above the *symphysis pubis* can be felt by the left hand. If any disproportion is present between the fœtal head and the maternal pelvis, it can be estimated in this way. The approximate size of the fœtus is taken into account if there is marked disproportion.

Now a word about the importance of the anterior shoulder. As Dr. J. C. Windeyer pointed out in his paper at the Brisbane Congress in 1920,[2] this landmark is of the utmost practical importance in judging of the progress of labour in all head first cases. When the head is fixed in the brim, before labour begins, the level of the anterior shoulder is on a horizontal plane ten to twelve and a half centimetres (four to five inches) above the symphysis. When flexion is completed at the onset of labour, the plane of the anterior shoulder is five to seven and a half centimetres (two to three inches) above the symphysis. As the head descends, this prominence approaches the *symphysis pubis* and when the head is bulging the pelvic floor, the anterior shoulder is just disappearing into the pelvis. Here then we have a valuable index of how the head is advancing without having to make an internal pelvic examination. Again, when the occiput is in front, the anterior shoulder lies within three and three-quarter centimetres (one and a half inches) of the middle line, whereas in occipito-posterior positions the anterior shoulder will be found at a distance from the middle line of more than seven and a half centimetres (three inches). In occipito-posterior cases the behaviour of the anterior shoulder during labour also serves to indicate whether the occiput is taking the long or the short rotation. In the former the shoulder will steadily turn to the middle line as it descends. When the short rotation takes place this bony landmark does not rotate forward, but disappears laterally as the shoulders approach the transverse position.

The fœtal heart is heard loudest about the scapular region of the fœtus, that is above and slightly lateral to the anterior shoulder. After a diagnosis of the position of the fœtus is made, the point of maximum intensity of the heart sounds serves to check the accuracy of our findings. I

need hardly mention that in the case of twins the diagnosis by palpation must be confirmed by the demonstration of two distinct heart sounds in different quadrants of the abdomen.

So much for normal vertex presentation. When the fœtus occupies an abnormal position in the uterus, some departure from what I have described will guide us to its diagnosis.

In mentioning the common abnormalities, I will briefly enumerate the salient points in diagnosis by abdominal palpation.

Face Presentation.

In face presentation the head is extended and the hard round occiput is made out with unusual ease, the back is deeply hollowed by the unusual position of the occiput. If the back is behind, the undue prominence of the chest in front can readily be felt.

Brow Presentation.

In brow presentation the head is mostly above the brim and is easily moved about, even when labour has started. The anterior shoulder lies a few centimetres higher than the normal five to seven and a half centimetres (two to three inches). The head is in a position midway between flexion and extension.

Breech Presentation.

In breech presentation the head is in the fundus and is distinguished from the breech by its larger size and harder consistency. It is separated from the back by the sulcus between the neck and the shoulder. Being hinged at the neck, the head forming an independent mass can be moved freely from side to side without affecting the back. Turning to the lower pole of the uterus, the resistant mass of the breech is felt continuous with the child's back. The prominence of the forehead, as found in a normal vertex, is absent. The fœtal heart sounds are loudest above the umbilicus.

Transverse Presentation.

Transverse presentation is suspected when the abdominal tumour appears exceptionally broad and is lacking in the usual height. To abdominal palpation the part occupying the fundus is not the head or the breech. The head may be discovered in one or other iliac fossa, but on account of the stretching of the abdominal muscles it may be difficult to identify. There is no presenting part to be felt in the brim.

Twin Pregnancy.

When twin pregnancy exists the uterus is often so stretched that palpation is difficult. The two important diagnostic points are the presence of three large fœtal parts and the auscultation of two distinct fœtal heart sounds of different rhythm.

Hydramnios.

The distinction between hydramnios and multiple pregnancy is often difficult. The outstanding feature, however, is the soft cystic condition of the uterus and the difficulty in defining the shape of the fœtus. The fœtus can be very easily moved about. The heart sounds are unusually faint and distant. The head does not become fixed in the brim until the onset of labour.

External Pelvimetry.

The most important measurements used in external pelvimetry are: The interspinous (normal twenty-two and a half centimetres or nine inches); the intercristal (normal twenty-five centimetres or ten inches); the external conjugate (normal seventeen and three-quarter centimetres or seven and a half inches) and the transverse of the outlet (normal eight and three-quarter centimetres to ten centimetres or three and a half to four inches). Between the interspinous and the intercristal there should be a difference of not less than two and a half centimetres (one inch); if they approximate more nearly, a flattened pelvis is to be suspected. If the first three measurements are smaller than the figures mentioned, a generally contracted pelvis may be present.

The interspinous diameter is taken by applying the points of the calipers to the actual points of the iliac spines and not to their outer surfaces.

The intercristal dimension should be taken from the centre of the iliac crests at their point of maximum curvature. If the measurement is taken from the outer margin of the crest, the lipping of bone which is very marked in muscular subjects, will give an erroneous idea of the pelvic width.

The external conjugate is measured from the depression below the last lumbar spine to the upper surface of the *symphysis pubis*. This measurement is made most accurately when the patient is standing up.

The transverse of the outlet is measured between the inner aspect of the two tubera and is taken when the legs are flexed on the abdomen. When measuring this distance the sub-pubic angle must be noted. If the angle is narrow and the transverse of the outlet is less than eight and three-quarter centimetres (three and a half inches), it is necessary to measure the distance between a line joining the two tubera and the end of the sacrum. This dimension has been called the posterior sagittal diameter.[3] In patients in whom the transverse of the outlet is contracted, this diameter should be at least seven and a half centimetres (three inches) to allow the passage of a normal head.

Internal Pelvic Examination.

An internal examination of the pelvis should demonstrate first the condition of the pelvic floor, vaginal walls and *cervix uteri*. The extent of engagement of the head is estimated by its relation to a line joining the two ischial spines. The diameter of the pelvis occupied by the head will confirm the diagnosis of position made by abdominal palpation. To estimate any disproportion between the head and pelvis Munro Kerr's method is employed. A finger in the vagina touches the vertex, while the thumb of the same hand palpates the abdominal wall above the symphysis. The head is now grasped above sinciput and occiput by the finger and thumb of the other hand placed on the abdomen. If pressure is now exerted on the head

by the abdominal hand in a downward and backward direction, the descent of the vertex can be felt in the vagina. If there is any disproportion and the head does not descend, the extent of over-riding above the brim is measured by the thumb above the symphysis.

Any tumours or irregularities of the pelvic walls can be felt by sweeping the fingers round the cavity.

Lastly, the diagonal conjugate is measured by passing the fingers into the posterior fornix as far as the sacral promontory, if it can be reached. The distance between this point and the sub-pubic ligament is marked on the index finger and measured by calipers, when the examining hand is withdrawn.

Conclusion.

In conclusion I would like to point out:

1. That ante-natal supervision is now a well-established department of preventive medicine.

2. That the method of examination is a simple procedure requiring only a little practice but no complicated apparatus and therefore lies within the scope of the general practitioner.

3. That every pregnant woman should be educated to expect a systematic ante-natal examination at least in her first pregnancy and also supervision in the last two months of every subsequent pregnancy.

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(1) J. C. Windeyer: "The Toxæmias of Pregnancy, with an Analysis of One Hundred and Fifty-eight Cases of Eclampsia," Transactions of the Australasian Medical Congress (British Medical Association), 1923, page 179.

(2) J. C. Windeyer: "Some Points in Clinical Obstetrics," Transactions of the Australasian Medical Congress, 1920, page 191.

(3) Whitridge Williams: "Obstetrics," Fourth Edition, page 826.

SOME ABDOMINAL CONDITIONS IN CHILDREN.[1]

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IN taking up tonight the subject of "Some Abdominal Conditions in Children" I have necessarily confined myself to a limited number and have chosen intussusception, congenital pyloric stenosis and pneumococcal peritonitis as likely to be of interest.

Intussusception.

I am somewhat diffident in bringing up the perhaps time-worn subject of intussusception, but I feel after some considerable experience both in cases sent to the hospital and also those seen in consultation with other medical men and too after reading many of the classical text-book descriptions that there is a place for one to try to collate the important symptoms and signs and show their relative importance in regard to diagnosis and prognosis.

[1] Read at a meeting of the New South Wales Branch of the British Medical Association on May 9, 1924.

The classical points are sudden onset, collapse, blood in the stool, tumour in the abdomen and mass to be felt in the rectum.

Of these the presence of blood in the stool and mass in the rectum, while of course helpful in clinching the diagnosis in a cases of some standing, should be considered essentially as signs of prognosis, for when save in exceptional circumstances the intussusception has reached the rectum, it is valuable not as a diagnostic sign but as the omen of impending death. So too the presence of blood in the stool should not be awaited as an aid to diagnosis; it may occur certainly in a few hours, but may not appear for more than twenty-four hours. An average taken of a large number of cases elicited the fact that the average time when it first occurred was seven hours, so that in many cases the diagnosis must be made before the appearance of this sign, if good results are to be hoped for.

A full description of this affection will tell us that it may be found at all ages, but for practical purposes it is essentially a trouble of the first year of life and those occurring later are due to some fixed pathological change such as a polyp or similar condition and they are of the general type of intestinal obstruction in which intussusception is a rare cause. No! it is in the baby that we must expect it as a common affair.

The points in diagnosis that I should like to stress, are these: Firstly, it is a disease of the first year of life, we might almost say of those months between three and nine and that the proportion of healthy breast-fed babies predominates to such an extent that it might be called a disease of these, though of course to both these points of age and feeding there are many exceptions.

The sudden onset with collapse is so typical that in most cases the mother realizes the seriousness of it. The child screams suddenly as the bowel is first nipped, then follow quickly pallor, sweating of the head and blueness of the lips. This collapse lasts for a variable time—minutes usually, sometimes even hours if the nip is very severe. The child in most cases quickly regains its normal colour and appears quite well except for occasional whimperings as it is momentarily doubled up with abdominal pain as the intussusception is pushed along the bowel, but the collapse of the initial pain does not recur. Vomiting is a symptom of no value and may not occur till late in the affection.

Should we hear a history of this sort it should immediately determine our course of action for us; it is either an intussusception or an unusually severe attack of abdominal colic with the odds at least seven to two on the former. We can immediately confirm our diagnosis of one or the other and ought to do so without delay; an anæsthetic should be given and the abdomen palpated for the presence of tumour.

The tumuor can occasionally be felt without anæsthetic, but the inability to do so is of absolutely no value as a negative sign. We must use an anæsthetic. In the early stages it can be felt in the right lumbar region by bimanual palpation,

as it progresses it takes a place above and to the right of the navel, then across the upper part of the abdomen above the umbilicus and can finally be felt in the shape of a note of interrogation with the upper end just curving around the umbilicus while the lower end is in the rectum.

These then are the diagnostic points—a healthy baby, sudden onset with scream and pallor and on examination under anæsthetic a mass in the abdomen. All other signs are of prognostic and not diagnostic value and show the increase in the size of the tumour and the gradually diminishing chance of recovery until the presence of the mass in the rectum is usually one of impending death.

I could quote cases in which medical men have refused to give diagnosis until the condition has progressed and blood is present and a mass can be felt in the rectum. Sometimes a normal motion is passed, but the administration of an anæsthetic followed by palpation reveals an abdominal tumour.

An intussusception practically always arises within seven and a half or ten centimetres (three or four inches) of the ileo-caecal valve; there are the ileo-caecal type with the valve as its apex, the ileo-colic type in the small intestine just a few centimetres above and the caeco-colic with the tip of the caecum as its point, the colico-colic and that arising from a Meckel's diverticulum are rare in babies.

Many theories have been put forward as to the cause, but the explanation of Hipsley appeals to me most, namely that it is due to an inflamed lymphatic patch that acts as does a polyp in the production of the condition. Certainly there is always an inflamed lymphatic patch at the apex of all these common forms, whether it is the cause or the effect of it. Personally I believe the former.

As to the treatment it rests between reduction by enema and that of operative manual reduction and I think that for general purposes there can be no doubt that the latter is the preferable. In the former method there is the risk that a small segment may not be reduced and even in hospital where careful watch can be given for signs of recurrence, delay will occur in cases where complete reduction was not effected by the enema. This of course is a risk that experience in skilled hands will lessen, but after all the risk is as great as that entailed by an abdominal section. In these days does the actual opening of the abdomen multiply the risks to any great extent?

As to the operation if the mass is in the ascending colon or early part of the transverse colon, a split muscle incision parallel and two and a half centimetres (one inch) above the gridiron appendix incision will give excellent access and satisfactory scar. If it has progressed beyond this, a long right rectus midline incision extending above the umbilicus may be used, preferably the former. When the tumour is located, it should be reduced by the movement of milking it back with the hand in the abdomen until the splenic and in most cases the hepatic flexure has been passed, when the tumour may be delivered outside the abdomen and the last part of the reduction done before the eye. The difficulties of reduction are not, you will be told in text-books, the adhesions that have formed between the peritoneal surfaces of the tumour, for none that would place any difficulty in the way could form in the time, but are due to the œdema. The mass has often to be squeezed and reduced a little at a time until it can be finally pushed quite back. At times when it is difficult to reduce owing to the œdema we will find that the mesentery at the bend of the hepatic flexure is overtaut and if this is snipped that a great deal of further reduction will be gained. In an ileo-colic or double intussusception where several centimetres of the ileum prolapse through the ileo-caecal valve, milking reduction efforts will fail to reduce the ileum, but it will be found easy to reduce this portion by merely pulling it out. Tears in the peritoneum caused by the forcible reduction are best left unsewn and too the blackened looking appendix so often found should not be removed for our motto in a case of intussusception should as in other acute abdominal conditions be: "Quickly in and more quickly out."

The question of resection is easy. If the gut is gangrenous, it has to be done and an anastomosis done or drain put in the proximal portion, but when it comes as a question whether the tumour is irreducible or not it will depend in a great measure on the experience of the operator. At the Children's Hospital we have but few resections and the explanation is, I think, that we are able to reduce intussusceptions that in less experienced hands would be resected.

At this hospital we have in the past fourteen years treated five hundred and nineteen cases with a mortality rate of 14.06%. The figures for each year are shown in the accompanying table.

These figures compare favourably with similar ones reported elsewhere and these results of which we have I think reason to be proud, are due to the work of Dr. Clubbe. Dr. Clubbe's researches into the symptomatology and treatment of intussusception will always stand as a landmark in Australian medical history. It is as a result of his teachings that we at the hospital get cases of intussusception in greater numbers and most important of all at earlier dates than is I think generally the case.

Congenital Pyloric Stenosis.

Congenital pyloric stenosis happens frequently enough to make it worth consideration. It has only been recognized of comparatively late years—some fifteen or thereabouts I think. I can remember looking for some time before I saw or rather recognized my first case and it was only after actually seeing a case that I began to recognize them with any regularity. It is only of late that we are at the Children's Hospital receiving any cases from the general practitioner outside. This fact and the increasing numbers that are being diagnosed and treated there, makes us think that the trouble is much more common than has been generally considered and that possibly quite a number of those

TABLE SHOWING THE RESULTS OF TREATMENT OF IN TUSSUSCEPTION AT THE ROYAL ALEXANDRA HOSPITAL FOR CHILDREN, SYDNEY.

Date.	Cured.		Relieved.		Died.		Remaining.		Total.	Percentage Mortality.
	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.		
1910	16 ..	10	..		1 ..	1	..		28	7%
1911	12 ..	5	..		2 ..	5	..		24	29%
1912	16 ..	12	..		2 ..	2	..		32	12.5%
1913	18 ..	9	..		2 ..	2	..		31	12.9%
1914	14 ..	7	..		1 ..	2	..		24	12.5%
1915	30 ..	9	..		5 ..	5	..		49	20.4%
1916	14 ..	9	..		3 ..	2	..		28	18%
1917	25 ..	8	..		2 ..	4	..		39	15.4%
1918	26 ..	12	..		2 ..	3	..		43	11.6%
1919	21 ..	2	..		6 ..	5	..		34	32.3%
1920	22 ..	9	..		4 ..	1	..		36	14%
1921	26 ..	18	..		1 ..	1	..		46	4.3%
1922	30 ..	15	..		2 ..	1	..		48	6%
1923	25 ..	22	— ..	1	3 ..	3	2 ..	1	57	10.53%
1910 to 1923 ..	295 ..	147	— ..	1	36 ..	37	2 ..	1	519	14.06%

children who die in the first three months of life, have died with the pyloric condition undiagnosed. The condition is marked by a very considerable hypertrophy of the pylorus and of the whole stomach wall; it is undoubtedly of developmental congenital origin and the explanation of Flynn, of Sydney, that it is a reversion to a primitive type as the gastric mill of the armadillo seems the most likely explanation offered up to the present.

These babies do not vomit to any marked extent until towards the end of the second week of life. It then becomes frequent, each meal generally being lost, and emaciation is progressive.

There are two definite diagnostic signs by which it may be recognized once the persistent vomiting has made it suspected: Firstly, the gastric peristalsis and, secondly, the pyloric tumour. The peristalsis is seen as one or more waves as though a small ball were rolling under the abdominal wall, its course being from the left costal margin towards the umbilicus. Once seen, no other kind of abdominal movement can be mistaken for it. This sign may not necessarily be elicited on the first examination. It may often be brought into evidence by feeding the baby to its full capacity, by flicking the abdomen or massaging the stomach, but at times it cannot be elicited and frequent examinations may be necessary before it is brought to light. The other sign, that of a small rounded tumour that can be felt to the right of the umbilicus, requires an anæsthetic when in most cases it can be felt. These two signs are sufficient to clinch the diagnosis. The projectile vomiting too is a symptom of much value and can generally be found by feeding the baby to its full when some or all of the fluid will be expelled with a forcible jet.

The diagnosis once made, what course of action should be pursued? My own personal view is that once a definite diagnosis is made either by the appearance of peristalsis or of tumour or of both, the case should be considered a surgical one and that Rammstedt's operation of longitudinal incision of the pylorus should be done at once. None of these patients improve immediately on medical treatment, but tend to get worse for some time. Is it any greater risk in these days of cleanly surgery to do a simple operation like Rammstedt's than to pursue a wait and see policy? I am sure that if we were to operate on all patients as soon as the condition was diagnosed, the results would be very much better than those obtained by treatment with medical methods. In the latter case the not inconsiderable portion who do not improve, are referred to the surgeon when an operation is a forlorn hope.

Should it be decided, however, not to adopt surgical methods unless there are strong contra-indications against the use of medical methods, there are two signs of much value in estimating the prognosis of the case. These are the quantities of urine voided and the condition of the skin and subcutaneous tissues. The elasticity of the skin may be tested by pinching up the skin. In a healthy babe the skin will return immediately to its former position. In the dehydrated baby it loses its spring and takes an appreciable time to regain its normal place. Should the urine be passed but once or twice a day and the napkin only be wetted on a patch the size of a crown and show the uric acid stain of the concentrated acid urine and should the skin have lost its elasticity, these may be taken as signs that the block is complete, that no fluid is passing the pylorus and that the tissues are becoming dehydrated. It will then be evident that temporizing measures should not be adopted, but operation at once performed. In the intermediate conditions in which the block is not complete, the tissues not dehydrated and some urine and fæces are passed, some patients will recover under medical measures and some will not and the latter will be referred to the surgeon when it is perhaps too late.

The condition is an interesting one especially as to the rôle that spasm plays. It is believed by some that pyloric spasm alone can cause all these signs and symptoms and that these cases of pure pyloric spasm will react to medical treatment. Personally I very much doubt the existence of pyloric spasm as a separate entity and have never seen visible peristalsis occur in a patient that had not also a pyloric

tumour when the abdomen was opened. Next comes the question: Is it the mass of the enlarged pylorus that causes the block or is there superadded spasm? I cannot see, without calling into account the onset of spasm in addition, how the child can go for the first two weeks of life without severe vomiting and then suddenly develope it. Yet the probability is that the mass is large enough in itself to cause blockage and that recovery is only brought about by an hypertrophy of the stomach sufficient to force the food through the thickened pylorus. But I think, however, that we must consider that there is probably a condition of spasm super-added, that is some coordination of action between the pyloric sphincter and the body of the stomach in cases in which a definite hypertrophy of the pylorus exists.

Pneumococcal Peritonitis.

McCartney and Fraser, of Edinburgh, in 1922 published an excellent contribution to our knowledge of pneumococcal peritonitis which briefly shows that the condition can be divided into two main groups, the primary and the secondary.

The primary group can again be divided into the acute or general and the chronic or localized form. They find that the primary form is always found in girls from the age of three to seven years, that it is always seen in the children of the poor and consequently uncared for, that an identical type of pneumococcus can be recovered from both the vagina and the peritoneal exudate in the child. Their explanation is that these children are uncared for, seldom bathed, have dirty perineal regions, their underclothing is generally inadequate, they are apt to sit on pavements or steps that have been contaminated with sputum, they often have some vulvovaginitis with an alkaline or neutral secretion. These facts they think would explain the age incidence, as up to three years the vagina is hardly patent, that from three to six years is the period when the clothes are short and contamination more directly possible. They also suggest that at the age of about seven years the vaginal secretion becomes acid and consider that this may have some bearing in the rôle of infection.

In general primary peritonitis the vomiting is usually excessive compared with other types of general peritonitis in the early stages and there is also diarrhœa due to irritation of the pelvic colon by the inflammatory exudate in the pouch of Douglas. There may be frequency of and pain on micturition. The peritonitis runs a typical course. For the first couple of days it is localized to the pelvis. On the third day it suddenly enters into the stage of septicæmia as shown by restlessness, cyanosis, quickened respiration, working of the *alæ nasi*, rapid pulse, delirium and increase of temperature. This is of course the period of severe danger to which most succumb.

There may be found, however, an infection of much less virulence or one in which the patient reacts better to the infection and in these the pus remains localized to the pelvis until it is well walled off. There is then a pelvic abscess which, however, gradually increases in size until the abdomen may occasionally be found full of pus with the intestines pushed right up into the upper part of the abdomen.

The writers of the article consider that they have reduced the mortality in the general peritonitis considerably by transfusing blood from a suitable donor—generally the father—at the stage of the onset of the septicæmia, but even at the best they quote a mortality of 42% (this of course in the generalized cases). In addition they drain early and think it preferable to do so through the vagina.

In the chronic cases drainage through an abdominal route will generally suffice.

At the Children's Hospital we think we have obtained improved results by large doses of serum in the acute primary cases, but our numbers for the time during which this has been adopted are too small to enable me to adduce any figures. The secondary forms appear as a sequel to a pneumococcal infection elsewhere, particularly of course the lung. It may occur as a result of carriage by the blood stream and appear anywhere in the abdomen. I have seen it with the appendix as the apparent source of infection. The peritoneum may also be found at times as the first site of infection, but generally the child will in the next few days show the signs of a typical pneumonia and it is then a question as to which was the primary site. Infection too may be spread by the lymphatic stream as in cases of sub-diaphragmatic abscess which may be secondary to a pneumonia and generally to an empyema. These are generally of low virulence and may escape notice. If unopened, they tend to point and discharge at the umbilicus.

I think that should we see a case of primary peritonitis in a girl of three to seven years we should remember that it originates in the pelvis. We should drain early, preferably through the vagina. We should give immediately large doses of pneumococcal serum and make preparations to give a blood-transfusion on the third day, if the disease then assume the septicæmic form.

SOME OBSERVATIONS ON THE TREATMENT OF THE FEEBLE-MINDED IN GREAT BRITAIN AND AMERICA.[1]

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IT is unnecessary to expound to this Section of your Branch of the British Medical Association the extent and urgency of the problem of the feeble-minded in Australia. We all recognize what a little has been done in this country to deal effec-

[1] Read before the Section of Neurology and Psychiatry of the Victorian Branch of the British Medical Association at Melbourne on July 27, 1923.

tively with so important a matter as feeble-mindedness. The fact is that reforms of this type must all of necessity receive financial support by the Governments of our States and the platform of the mentally deficient is not one which influences greatly the question of securing votes in political life. No body of men sees more of this problem than we in our professional work and it is, therefore, our duty to consider what can be done to ascertain what has successfully been achieved in other countries and to do our best to educate public opinion to act accordingly. There is no legislation in Australia dealing directly with the problem and only persons afflicted with advanced degeneracy are given any care or protection and then only because they are actually forced upon the hands of our public institutions which are really designed for different work. In Victoria you have a couple of day schools under the control of the Education Department, but in other States there is no provision at all for the special education of the retarded child.

In Great Britain there were founded even before the *Mental Deficiency Act* of 1913 was passed, special schools for the instruction of defective children, such as the Royal Eastern Counties Institutions at Colchester. Defective children are much happier in such institutions than fighting for themselves in competition with more intelligent children in the community. They are grouped according to their mental capacity and their occupation is carefully graded. The material produced by the children of such schools largely defrays the cost of their upkeep and, although their time and labour are not made use of merely for the sake of producing articles which will lower their cost of maintenance, it is surprising what useful work they can be trained to accomplish. Such schools have attached to them colonies to which the more advanced and better trained boys and girls are drafted. These persons cease to be a danger to the community as they are detained under institutional care and so are kept practically cost free.

The British Royal Commission of 1908 found that 0.46% of the population of England and Wales was feeble-minded.

The Mental Deficiency Act in England.

In England the *Mental Deficiency Act* of 1913 has brought many children before the notice of authoritative bodies such as the London County Council. The *Act* defines the following classes of persons who are mentally defective within its meaning: (*a*) Idiots, (*b*) imbeciles, (*c*) feeble-minded persons, (*d*) moral imbeciles.

A defective person may be sent to or placed in an institution for defectives or placed under guardianship: (i.) At the instance of his parent or guardian if he is an idiot or imbecile or (ii.) in addition to being a defective if he is neglected, abandoned or without visible means of support or cruelly treated, if he is found guilty of any criminal offence, if he is undergoing imprisonment, if he is an habitual drunkard or if he is in receipt of poor relief, or in the case of a woman is giving birth to an illegitimate child.

Under the *Mental Deficiency Act* the certifying officer has to determine whether the individual is fitted for his normal environment, whether that be the nursery, the school or the world, and, should he not be fitted, he must determine whether this is due to mental deficiency from an early age. To determine this he must examine the personal and family history of the subject, together with the results of the physical examination and mental examination. It is found at the London clinics that children under school age are generally brought by their relatives. They can only be dealt with under the *Act* if in addition to being defective they are to some extent neglected. Children of school age are brought generally by the teachers who complain of failure on the part of the scholar to respond to their efforts. Children not attending school are often found out by truant inspectors. Persons over the school age are generally referred by the courts and can be dealt with when they are defective and when there is evidence of lack of care and control.

The family history is of value as it indicates the predisposition to mental defect, but it is important not to over-value this factor should it not be in accord with direct observation. A child of an insane parent might be retarded because of lack of opportunity, ill-health, malnutrition *et cetera*, although there may be often defective brothers and sisters. Personal history is of more importance than family history in estimating feeble-mindedness and this history should include natal and pre-natal influences, birth incidents, accidents and illnesses during childhood. Hemiplegia, epilepsy, meningitis and syphilis are the most important physical illnesses concerning which inquiry should be made. The order of birth in the family is of little importance, except that a mongol is frequently the last living child in a family. If there is delay by the third year in walking and talking and becoming clean in habits, it is suggestive of mental defect. This is of value in the diagnosis of young children and also is evidence in older children that the condition commenced in early life. The possible loss of schooling due to the financial conditions of the parents has to be considered.

The medical examination is in two parts, physical and psychological. In the physical examination malnutrition, fatigue, physical illness, physical stigmata, adenoids, defects of the special senses *et cetera* are looked for as these might give rise to mental retardation. The importance of stigmata of degeneration is generally over-estimated. The general attitude of the subject does not always indicate his mental capacity; some children who look bright, might have suffered from physical disease, such as meningitis, which may have caused considerable cortical damage. A complete neurological examination is generally advisable.

The psychological examination is generally carried out by intelligence tests, but in addition to the intelligence of the individual the temperamental aspects have to be considered. In London the Binet-

Simon tests and their various modifications, Healy's tests, Porteus's tests and word association tests are most frequently used. Some modified and short tests have been evolved to obtain an approximation of the mental age of the patient when a thorough investigation is not at the time possible. In the Healy tests the subject is asked to replace blocks in a frame. They are useful in showing how the patient benefits by past failure. Many feeble-minded children, even after being shown how to perform these tests, persist in repeating them incorrectly. The Porteus tests are useful in estimating the powers of foresight and planning and ability to concentrate attention on a given task. They indicate the capacity of the child for success in the social world rather than in school attainments. The word association tests are of more use with adult defectives and with high grade defectives. The replies to the questions in these tests given by defectives resemble those of a child of much younger chronological age and often there is no apparent relation between the responses and the stimulus word given. Emotional reactions can be tested by means of the psycho-galvanometer.

The temperamental features of the patient are more difficult to assess because the data must come mainly from other persons. Of course the general attitude of the patient during the examination is of value in this estimation.

Children may be looked upon as being either unemotional or belonging to an emotional type either restrained or unrestrained. The unemotional subject appears to be more mentally retarded. Sensibility to pain is often decreased, feelings of sorrow do not long persist and joy is generally expressed by physical activity.

The instinctive reactions of the defective child resemble more those of a child of fewer years. Much stress is laid by teachers on precocious sex interests, perversions and the like. Sex precocity, however, is not always associated with mental defect.

In diagnosing mental defect it is not sufficient to say that the subject is mentally retarded by three or four years as evidenced by psychological tests alone. Sometimes the subject may pass many tests up to his average age and yet he may lack the power to care for himself. The estimate of the mental retardation must be accompanied by a history of school or social inefficiency. If in addition he has imperfect physical development and there is a history of deficiency in other members of the family or evidence of former illness in the subject, the diagnosis is simple. Neuroses and psychoses must be distinguished by the history. When the patient has had epileptic fits from early life and there is mental retardation present, he will usually require special education.

In England the *Mental Deficiency Act* requires that the subject should be classified in one of the four headings: (i.) An idiot, if unable to protect himself from ordinary danger; (ii.) an imbecile, if able to protect himself from such danger, but unable to manage himself or his affairs or of being taught to do so; (iii.) as feeble-minded, if he is in need of care and control for his own protection and that of others; (iv.) a moral imbecile, if from an early age he displays permanent mental defect coupled with strong vicious or criminal tendencies on which punishment has had little or no deterrent effect.

In each case the defect must have been present from birth or an early age and must be due to mental defect and not to other causes. It is generally the practice to regard children with a mental age of less than three years as being idiots, those with a mental age of three to seven years as imbeciles, those with retardation of three years or more and with a mental age of seven years as feeble-minded.

Experience in London shows that no person with a mental age of eight years is able to fend for himself; some with a mental age of eight years can carry on under sympathetic conditions, while those of nine or ten years' mental development are able to fend for themselves with a reasonable degree of supervision. A subject with an intelligence quotient of between 0.75 and 0.9 would be regarded as dull and this together with the evidence of vicious or criminal propensities would be sufficient to label him a moral imbecile. Children are sent to special schools when they have a retardation of two years up to the chronological age of seven or eight, or of three years above that point. When children are examined at the age when they should be leaving school stress is laid rather on the question of employability and self-protection; they would not be looked upon as defective unless they were in need of care, supervision and control.

Porteus in his new book "Individual Deviations" considers that a person is feeble-minded when the intelligence quotient is 0.70 or less, according to the Binet-Porteus scale.

Methods Adopted in Scotland.

In Scotland the feeble-minded are cared for mainly by a boarding-out system which is under the control of the Commissioners in Lunacy. Children may be boarded out in small groups to the care of their own parents when such arrangement would be suitable or to the care of special persons licensed by the State. Feeble-minded persons are visited regularly twice a year by a deputy commissioner in lunacy, four times a year by the local medical officer and twice a year by an official appointed by the parish council. Each individual is, therefore, given personal care, but the system does not provide special facilities for his education. Some colonies are provided where such education and training can be better carried out. In Scotland there have been for the last forty years or more between two thousand and three thousand quite harmless persons with chronic mental defect, mainly feeble-mindedness, boarded out in this fashion. The average cost per head is twelve shillings and six pence per week, whereas the average cost in institutions for ordinary maintenance is nineteen shillings and six pence per week; if you add to that depreciation on the institutions themselves, the cost is about twenty-five shillings per week. The allowance given to persons

who take charge of feeble-minded patients, varies according to whether the patient can assist either with housework or in the work of a small farm, the amount paid varying from seven shillings and six pence to twenty shillings per week. All the guardians are licensed and no house can have more than two patients until the guardians have proved themselves suitable and then not more than four patients can be taken care of. The tendency in Scotland is to discourage the hospitals from taking large numbers of defective persons and to encourage more persons to become guardians of small groups of patients.

Persons dealt with under such a system must not be offensive to the public in any way, but must be docile and quiet and able to participate in the family life of the guardians. To a large extent they do participate in the communal life round about them. In Scotland the system seems to be on the whole successful. In Belgium and Holland similar systems are advocated, but it is quite doubtful whether it would be found successful in Australia where we have larger areas and greater natural conditions to contend with.

American Methods.

Undoubtedly America has developed the most efficient systems of dealing with the problem of the feeble-minded. It is only in certain parts of America that this efficiency exists. In some States there is practically no supervision whatever and the institutions are very unsuitable; but in the last quarter of a century wonderful progress has been made, especially in States such as Massachusetts, New York and California. The attitude to the problem in these States is very satisfactory and the equipment is very extensive. It is recognized that with special training defective children can be made useful and happy and that without it they grow up useless and become dangerous members of the community. Feeble-minded children require more special training than normals in order to accomplish anything like satisfactory results. They can be taught to carry out useful work and they thrive under kindness, praise, reward and the like. They react readily to any person who wins their confidence. If they could all be brought up in good homes, they would cease to be the social menace they are today, but most of them live in most horrible surroundings. Many criminals are created by their environment.

The wide use of psychological tests in America has greatly facilitated the rapid recognition and classification of defective children. Besides individual tests, group tests have been used by means of which large numbers can be tested in a few hours in the schools and the possible defectives can be given more individual investigation later. The value of psychometric tests as measures of intelligence and as means of sifting out the dull from the normal and superior cannot be denied, but they alone are quite insufficient in making a diagnosis of mental deficiency. The physical factors, the possible disturbance of the endocrine system, family history of degeneracy, all of which must be investigated by the physician, cannot be adequately understood by the lay psychologist. In America psychologists are used in some clinics, but their reports are always furnished to the physician who makes the final diagnosis. In most cases the psychiatrists are trained in psychology and are able to make the whole of the examination themselves without reference to the lay psychologist at all. In the American army 72,000 recruits were prevented from going to Europe in 1918-19 on account of mental and nervous defects which were discovered by the examination of psychiatrists.

It is recognized in America that defectives for the most part are manually minded and that training, therefore, must involve the use of the hands. Agriculture and carpentry are best for boys. Girls are trained to become kitchen maids, chamber maids, laundresses, seamstresses and so on and whilst being trained in these employments, they are taught to follow a more stable moral code and to become more self-supporting. The question whether the moron will become a useful or harmful citizen depends much more upon the training he has had than upon the degree of his mental defect. The solution to the whole problem is mainly an educational one.

There are three chief methods employed for the teaching and training of defective children: (i.) By special classes in the schools, (ii.) by advice to parents given at public clinics, (iii.) by special institutions.

For a long time it was thought that segregation was the only satisfactory method of dealing with the mental defective, but when we realize the extent of the problem, it is evident that there must be extra-institutional means of dealing with it. The lay enthusiast is inclined to clamour for sterilization. Most of the States of America have laws dealing with this matter. In the State of New York it was inoperative for years and was recently repealed without opposition from any of the State charitable societies. Courts have been loath to order the operation and even when they have done so, surgeons have refused to undertake it. The public are not ready for such an assault upon the life and liberty of the individual, even of defective members of the community.

Most of the sterilization laws in the United States have been declared unconstitutional. Some of the State laws declare that a physician who refuses to operate when ordered to do so by a court, is liable to thirty days in gaol; then, on the other hand, should he operate in spite of the law he might be fined one thousand dollars. Sterilization by law is unnecessary. If the consent of all the relatives is obtained, there should be nothing put in the way of carrying out sterilization in suitable cases. For many years years this has been the practice in many hospitals in America; for example at the Buffalo State Hospital for Women they have carried out sterilization without reference to any law, when the written consent of the relatives has been obtained.

The best way to keep the defective child out of an institution, whether penal or custodial, is to educate and train him in his early school years. Training and education must be given in special classes and special schools. Education will not remove the mental defect, but the child's resources are organized for the best results.

In the State of New York the law makes provision of special classes obligatory and therefore they exist in all large cities and most of the larger towns. It is difficult to provide for special teaching in the small rural districts, but children from such districts are often sent to special schools nearer the cities. Special schools are much more valuable than special classes in ordinary schools.

Psychiatric clinics are of much value in extending assistance to the defective children of the cities. They are the active agents for bringing the children in touch with suitable schools and institutions as soon as the defect is recognized. Less than 10% of feeble-minded persons seen in the clinics in the State of New York are over sixteen years of age. Parents are instructed as to the means of securing the proper education for their children and are assisted in the management of the children in their homes by visits from the social service workers connected with the clinics.

The difficult children are sent from the schools, courts and charitable organizations to the clinics for advice and as a result retarded children are given more suitable educational opportunities and delinquents are judged more in accordance with their mental capacity. Well organized clinics can assist feeble-minded persons to remain in the community yet under supervision and commitment to an institution comes only as a last resort. Physical conditions are often found to account for the mental defect and these can be suitably treated. In the State of New York there are clinics in the smaller country towns visited, say once a month, by psychiatrists from the cities and thus the whole of the State is reached by specialists. Especially in conjunction with the children's courts are clinics necessary for the proper disposal of feeble-minded persons. It is not necessary to examine all delinquents psychologically, but some of them obviously require mental examination. In the State of New York in 1917, 781 out of the 14,519 children appearing in the children's courts were examined at the psychiatric clinics and of this number 504 were feeble-minded.

Most valuable social service is rendered by the provision of after care for patients discharged on parole from institutions and under the care of families, friends or responsible guardians. Many of the patients can thus be dealt with effectively outside institutions.

Schools for the training of feeble-minded children are generally controlled by the State, but some are organized by committees and financed by public subscriptions. Among the most modern schools which I have visited, I might mention Letchworth Village at Thiels in the State of New York which is a model in construction and scientific planning. The buildings are only one storey in height and there are in each separate block in the village only about ninety children. In such a village it is possible to group the children according to their mental capacity and the teaching of all grades can be carried out. The children in such a school taken individually are dull, but when trained in groups they do their work with great credit to themselves and their teachers. They are much happier when carrying out their class work than when left alone to themselves. Such institutions have connected with them industrial colonies where the elder children who are not fit to be discharged altogether, can yet earn their living under institutional conditions. Very little supervision is required in such colonies over the conduct of the patients, only management of the business side of the colony being required by a trained staff. The colonies produce much farm material which is supplied to the State institutions or disposed of in the open market. At Rome in the State of New York besides farm colonies for the boys trained institutionally at the school, the colony system has been extended for the past ten years to the girls of the school. Such colonies are really working girls' homes, supervised by a matron. The house itself is kept as homelike as possible. The more trustworthy of the girls go out as nursemaids to families in the town; others are employed in general house work and some even are working in factories. There has been little or no conflict with organized labour; the girls enjoy a measure of freedom and at the same time are being kept under the care of an institution. Under this supervision their morals are as well safeguarded as in the institutions. Dr. Sanger Brown, the Commissioner of Mental Defectives in New York State, assured me that such colonies are working quite satisfactorily and that there is not any evidence of immorality connected with the members of the colony when carrying out their occupations. These colonies are not altogether self-supporting, but the cost of maintenance is kept down to half in contrast to the ordinary institutions and the schools can take more inmates as they draft off their trained pupils to the colonies. Thus colony life generally solves the problem of commiting high grade defectives to institutions for life and overcomes the natural reluctance of the public to confining their children and adolescents to institutions. Many of the inmates are finally paroled and discharged from the colonies, so that they form a final link between the institutions and the outside world.

The institutions in the State of Massachusetts such as the schools of Waverley and Wrentham, at Boston, are perhaps the most efficient in the world. In these residential schools the lower grade children learn by sense of touch rather than by hearing and vision. For slightly higher grade children the Montessori methods are adopted. Children are never kept for more than three-quarters of an hour at a time, even older children are only given half a day's schooling. The older girls are taught domestic science, how to change money, to wait on table and the like. After the general education has been taken as far as possible, the girls are taught to use knitting machines, to make dresses,

baskets, mats, lace, hammocks, bags *et cetera*. The still older but morally delinquent girls are employed in the kitchen and laundry. In the various class rooms samples of good work are exhibited in order to guide the pupils who are copying the same type of work. Imitation is the main line of teaching for the feeble-minded.

The high grade boys learn various trades, such as bedstead making, boot making, painting, carpentering and so on. The less educable are put to outdoor work and many of them are finally drafted to the farm colonies.

The work of Healy is well known to all students of this problem. He is the director of the Judge Baker Foundation, at Boston, a fund which was given for the purpose of research in the problem of the feeble-minded and delinquent child. This Foundation has established a research clinic where courts, institutions and the public can refer their difficult *protégés* and at this clinic advice can be given which will place the patient under most favourable conditions for treatment. In New York City a somewhat similar clinic has been established known as the Bureau of Children's Guidance under the direction of Dr. Bernard Glueck. Such research clinics are of great value and psychiatrists from various centres obtain special training and experience thereat.

Conditions in Australia.

In contrasting our conditions in Australia with those I have described in Great Britain and America, we must admit our great inferiority. As medical men we can do much to stimulate public interest and to assist in the solution of the problem. We must first of all see to it that our medical graduants have been properly trained in the diagnosis of feeble-mindedness and that they understand the importance of early treatment and training for this condition. At Sydney University a diploma in psychiatry has been provided which will give graduates the opportunity of gaining further training in these and other branches of the subject. A clinic has been established in conjunction with the Royal Prince Alfred Hospital where medical students can be given practical instruction in the diagnosis of mental defect. The difficulty is that we are unable to advise the parents of defectice children where they can obtain the necessary education and training because there are absolutely no special classes or institutions, either State or private, for the training of the defective child.

The Department of Education in New South Wales has decided upon the establishment of a special residential school containing three separate buildings for girls and three for boys where the higher grades of feeble-minded children who should benefit by special education, will be received. The Government of New South Wales has promised to introduce a bill which will provide for the taking of a census of all the feeble-minded in the community and will afford the necessary facilities for the care and treatment of all persons where the necessity for this is indicated. There will be two main classes to be provided for: (i.) Those of school age who are likely to benefit by instruction in special schools to be established, (ii.) those not likely to benefit and adolescents and adults.

It is hardly necessary to wait until the actual census of feeble-minded persons is taken because we already have a very general idea of the prevalnce of feeble-mindedness, but steps can immediately be taken to select and train teachers for the work in special schools to be established later. The special schools should be as far as possible residential institutions and the higher grade defectives should be trained for colony life or industrial work in order that their maintenance later will be as light a burden upon the State as possible.

Psychiatric clinics should be established at all our larger public hospitals to assist parents, teachers and law courts in their difficult problems and to act as feeding centres for the special schools. Travelling clinics could attend at the country centres.

Social service activities should be organized in conjunction with the clinics and the special schools, in order to help the parents and teachers of such feeble-minded children as are not in need of institutional care. The Red Cross Society with its extensive organization might well cooperate in this work.

The juvenile courts should have access to psychiatric clinics for guidance with their delinquent individuals.

It is especially necessary for the medical profession to be alive to this problem, lest its solution should drift into the hands of lay extremists. It is unlikely that we shall succeed more than other countries in persuading the general public to adopt the programme of sterilization by law. We must, therefore, encourage the intelligent use of segregation. The more thoroughly segregation can be carried out, the more thoroughly can the whole problem be dealt with.

It is our duty to endeavour to educate public opinion to accept an effective plan for the proper education and care of the feeble-minded members of the community and for the elimination of feeblemindedness as far as this is practicable.

Reports of Cases.

AN UNUSUAL CASE OF ŒDEMA.

By V. J. KINSELLA, M.B., Ch.M. (Sydney),
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S.McG., *ætatis* sixty-three years, was admitted to the Royal Prince Alfred Hospital under the care of Professor Mills in 1921. He was drowsy and somnolent, had lost weight and suffered from pyrexia and albuminuria. No satisfactory diagnosis was made and the patient left the hospital relieved.

He was re-admitted on January 4, 1924. His mental condition was dull. He complained that three months previously he began to notice "a weakness in the legs and back" on going up and down stairs. This became worse until he could scarcely get about. Moreover, he began to get short of breath at this time, his appetite

completely disappeared and he had lost a great deal of weight. He had slight frequency of micturition (twice at night), but no difficulty and no pain with the act. For ten days he noticed that his legs were becoming very swollen.

On examination it was seen that the patient was a big man whose skin hung loosely about him and who appeared to have lost a good deal of weight. His complexion was pale and of a brownish-yellow tinge. The most striking feature on examination was the tremendous œdema of his feet and legs. There was no tenderness or swelling along the course of the veins in the legs. The patient's temperature was remittent, rising to 38.4° C. to 38.9° C. (101° F. to 102° F.) at night.

Progress and Unsuccessful Attempt at Diagnosis.

So far we had no idea of the cause of the weakness and œdema; it was not cardiac (for neither the heart nor the liver was enlarged, there were no accompaniments to the heart sounds and the blood was sterile on culture); it was not due to anæmia (as shown by a blood count); it was not caused by peripheral neuritis (for the knee jerks were active and there was no tenderness on squeezing the calf muscles); it was not due to renal inefficiency (for repeated examination of the urine had revealed only a faint cloud of albumin with no cells or casts,) the vessel walls were not thick, the blood pressure was moderate and the blood urea was well within normal limits, namely twenty milligrammes per one hundred cubic centimetres. It may have been some local condition such as new growth pressing on the inferior *vena cava*, but this could hardly have caused such a profound general disturbance without becoming apparent on examination. The swelling of the legs could have been due to a venous thrombosis and the association of a possible thrombosis with loss of appetite, weakness and pyrexia strongly suggested typhoid fever. The Widal test was done and a positive reaction obtained. The patient was now treated as a case of typhoid. Grave doubts were thrown upon this diagnosis, for repeated examinations of the stools and urine failed to reveal the *Bacillus typhosus*. Moreover, the progress made by the œdema at this stage, four weeks after the patient's admission to hospital, definitely excluded from the diagnosis local conditions obstructing the venous return, *exempli gratia* thrombosis. In spite of rest in bed, salt-free diet, restriction of fluid and bandaging of the legs the œdema made steady headway, so that the patient now presented an extraordinary appearance. As he lay on his back in bed with his knees flexed over a pillow, he was becoming water-logged in his dependent parts. The legs were tremendously swollen below the knee, thin and wasted in the immediate neighbourhood of the knee joint and again tremendously swollen in the neighbourhood of the buttocks and proximal part of the thighs. Huge ridges of œdematous tissue formed on the patient's back, corresponding with the depressions between the pillows on which he lay. He often rolled over on his left side and allowed his right arm to hang down in front of him over the edge of the bed. The right hand became œdematous and a purpuric patch appeared on the right forearm. Ascites was present.

This widespread and appalling condition could be due to one thing alone—the distribution of some noxious agent throughout the body by the circulating blood and this poisonous substance had caused all the symptoms and was causing the pyrexia and œdema. We had to deal with a toxæmia, but we knew neither the nature nor the source of the toxin.

About one week later the scrotum became œdematous and in two days assumed the form of a big smooth translucent sphere about fifteen centimetres (six inches) in diameter. This was supported on the patient's abdomen and in four or five days resumed its normal proportions. The patient's general conditions got worse and he gradually sank and died eight weeks after admission.

Post Mortem Findings.

It was found that the right lung was adherent to the pleura over its whole surface. These adhesions were particularly dense at the base. In attempting to separate the lung from the diaphragm, the latter was torn and an opening made directly into a large sub-phrenic abscess lined by thick walls, crossed by leashes of fibrous tissue bearing blood vessels and so resembling a chronic phthisical cavity. This abscess was the remains of the right kidney. It was completely shut off from the ureter and immovably fixed to surrounding structures. No vestige of renal substance remained. The left kidney was greatly enlarged and "apparently perfectly healthy except that the capsule showed a few adhesions." It had evidently hypertrophied and efficiently carried out the renal functions without the help of its fellow.

Comment.

Professor Mills has suggested the publication of this case because it is a striking illustration of the relative importance of factors producing œdema. It is sometimes thought that the main cause of œdema is the mechanical obstruction to the return of the venous blood and consequent rise in intra-capillary pressure and that this causes an overflow of lymph into the tissues just as the damming of a river may cause the water to overflow and inundate the surrounding country. But this is not so. A factor of far greater importance is the permeability of the capillary walls and the state of nutrition of the tissues. Stasis may cause œdema, but only indirectly through interfering with the nutrition of the capillaries (and so making them less able to retain the fluids of the circulating blood) and of the tissues (so that they approach the condition of dead tissues which swell up and absorb water like a sponge, if immersed).

The great importance of the capillary endothelium is suggested by the difference between the lymph flow from a limb and that from the liver and intestines. From these latter lymph is continually flowing, but no lymph flows from a cannula inserted into the lymphatics of a limb unless that limb be exercised. Moreover, while the lymph from a limb is comparatively poor in protein, that from the liver and intestines is almost as rich as the blood plasma. We can hardly invoke differences in intra-capillary pressure to account for these facts. Further, it is found that alterations produced in the intra-capillary pressure by compressing either the vein or the artery will cause marked changes in the lymph flow from the liver and intestines, but very little or no change in the lymph flow from a limb. So if we ligate the femoral vein of a dog we do not get œdema until the tissues and capillaries have been so damaged through deficient supply of fresh blood and imperfect removal of waste products that the capillaries can no longer perform their functions and the tissues retain water as do dead tissues. This takes a considerable time. However, if we first of all interfere with the circulation in the limb by keeping it elevated or placing an elastic bandage round it for an hour, œdema follows ligation of the vein in a very short time. Compare the history of venous thrombosis, *exempli gratia phlegmasia alba dolens*. The woman complains of sudden pain in the limb, but it is only after some hours that œdema appears.

The œdema in the dog which is the subject of the above experiment, and in the woman with throbosis does not depend on a merely mechanical mechanism, for, if it did, it would appear immediately. The great factor is the condition of the tissues and capillary walls and this is well illustrated by the case described above. There was no "back pressure," no stasis, no obstruction. But the tissues had been damaged by toxins and the limb capillaries had likewise been damaged so that they were now like the liver capillaries—they allowed fluid to pass through them readily and slight alterations in pressure, such as hanging the hand down over the side of the bed, produced a marked increase in the amount of transudate—an effect that could not be produced in the healthy limb with normal tissues.

Having grasped this principle it is easy to understand how factors other than obstruction may cause œdema. Examples of these others are physical agencies (heat, cold, trauma *et cetera*), malnutrition (anæmia, diabetes *et cetera*), toxins injected or formed locally (*exempli gratia* the sting of the "blue-bottle" or acute bacterial infection) and toxins borne by the blood stream (as in nephritis, drug rashes and various forms of urticaria due to foreign pro-

tein perhaps ingested, or injected as antiserum or liberated from a ruptured hydatid cyst).

The above discussion is not intended as a complete survey of the subject of œdema or as a complete consideration of this case, but merely as an illustration of the relative importance of factors producing œdema.

Reviews.

GYNÆCOLOGY AND OBSTETRICS.

A COMBINED text-book of obstetrics and gynæcology by Professor J. M. Munro Kerr and Dr. J. Haig Ferguson together with their chief assistants Drs. James Young and James Hendry, should prove exceedingly useful to Australian students and practitioners.[1] Especially should this be so in those schools, Melbourne and Adelaide, where the subjects are taught as one. We are aware that in Sydney for many years past obstetrics and gynæcology have been independently taught. Furthermore, "women's specialists" in various parts of Australia have at times asserted that no one person can possess a teaching knowledge of both subjects and that where attempts are being made to maintain a combined department, the practice of one or other subject is exaggerated to the detriment of the other. Be this as it may, the authors claim that "the relationships of gynæcology and obstetrics are so intimate and so interdependent that it is impossible to have a thorough grasp of one without the other. . . . It is for this reason that these two subjects should be closely associated, not only in teaching, but in practice."

Of interest in this connexion is the comparatively recent reunion of the Edinburgh chairs of obstetrics and gynæcology after several decades of separation. The combined chair is held by Professor B. P. Watson, whose name we note with regret is not associated in the work under review with the other well-known Scottish authors.

We have entered rather fully into the above thesis because it may be safely said that unless the authors succeed in their attempt to correlate more closely obstetrics and gynæcology, they will have failed in their main objective, albeit they have done the student some considerable service in eliminating the repetition and overlapping which must occur in separate manuals upon these subjects. Much of the teaching and most of the illustrations in the present work have appeared previously in the individual publications of several of the authors.

The fifty-seven chapters are arranged on conventional lines, the only novel feature being a connecting chapter between obstetrics and gynæcology. The "make-up" of the book may be best gauged by considering the allotment of about one hundred pages to anatomy, physiology and development, five hundred pages to obstetrics (including infant feeding) and three hundred and seventy pages to gynæcology. A full index of thirty-five pages is provided, whilst many cross-references occur in the text. The illustrations are simple and effective line drawings and make no attempt at the elaborate realism we are accustomed to expect from American authors. Perhaps the most brilliant sections of the work are those dealing with physiology, toxæmias of pregnancy, ectopic gestation and Cæsarean section.

The anatomical portion is adequate, a noteworthy point being the considerable divergence of the Glasgow and Edinburgh pelvimetric standards.

In discussing normal pregnancy it might have been expedient to give exaggerated emphasis to the all-important *ante partum* examination. One can imagine, by way of contrast, how the author of an American text-book would "star" this "feature."

The chapter on abortion which should be one of outstanding excellence, falls far short of this ideal, whereas the definition given is quite fallacious. Why should we speak of "ovum" when we mean "zygote"? Even should we wish to escape an unjustifiable charge of pedantry by using the later term, the substitution of "gestation" or "developing ovum" would at least avoid a biological inaccuracy.

The chapters on general diseases complicating pregnancy contain the usual miscellany found therein. The authors, however, have wisely "spread themselves" on the subjects of cardiac disease, pyelitis and venereal diseases. Each of these is splendidly done and right up to date. We think something on contraception might conveniently have been introduced into this section. The book follows the usual plan of advising against pregnancy in severe grades of heart disease *et cetera*, but when the young practitioner repeats this advice to his first patient he is not uncommonly made to feel rather foolish for lack of knowledge of contraceptive methods.

The chapters on labour contain probably the most authoritative and valuable information in the book. No reference is made to Buist's valuable method of *ante partum* correction of occipito-posterior positions by use of abdominal pads nor to the many valuable "tips" in breech extraction given by Dr. Irving Potter, of Buffalo, New York. We like the authors' suggestion regarding X-ray examination of the new-born for birth injury, but we find no reference to the value of X-rays in the diagnosis of dead fœtus or multiple pregnancy.

The chapter on pelvic contraction reaches larger proportions than is warranted by Australian conditions. The explanation lies in the statement: "30% of women in Glasgow have pelvic deformity."

The gynæcological section of the book is reasonably short and to the point. Pozzi's and other unfamiliar operations are described or illustrated at length together with the complicated major procedures that a young practitioner would never perform, whereas no mention at all occurs of posterior colpotomy. An utterance of W. J. Mayo whilst in Australia is appropriate. He said: "Do not attempt to teach students all surgery; it cannot be done; familiarize them with the procedures they are likely to perform often."

Quite a number of misprints occur throughout together with certain crude expressions such as "less-living parts of the skin," "*carunculæ myrtiformes* are warty prominences." In subsequent editions we should like to see the definition of certain terms amended. The convenient term "lie" designating the relation of the long axis of the child to the long axis of the uterus finds no place in this book. Instead we find "presentation" given this significance. We prefer to define "presentation," broadly, as the most dependent portion of the fœtus or, more definitely, as that portion of it which lies over the internal os. According to this definition "transverse presentation" is a terminological inexactitude which should be either "transverse lie" or "shoulder presentation." As a consequence we get an Irishism such as occurs on page 305: "In a transverse presentation it is usually the shoulder that presents." The authors' definition of "position" is very confusing. We prefer to define it as the relation of the back of the child to the back of the mother and explain to students that no matter what part presents, the fundamental denominator of position is the back.

British nomenclature, of course, includes certain subsidiary denominators (chin, occiput, sacrum), but their use does not upset the truth of the above proposition. On page 356 we get two inexcusable instances of the misuse of the term position. Firstly, brow presentation is spoken of as the most unfavourable position of the vertex (*sic*) and a few lines lower down in describing the attitude of the head we read: "The position is one midway between vertex and face." A clinical definition of eclampsia is much better than defining it as a toxæmia when it is admitted that the ætiology is unknown. Again, this book in common with many others makes too frequent use of the word "septic" which, in spite of its convenience, is incapable of exact definition and should therefore be dropped.

The above fault-finding does not blind us to the many excellencies of this book and we can thoroughly recommend it to the discriminating reader.

[1] "A Combined Text-Book of Obstetrics and Gynæcology," by J. M. Munro Kerr, M.D., F.R.F.P. and S. (Glas.), James Haig Ferguson, M.D., F.R.C.S. (Edin.), James Young, D.S.O., M.D., F.R.C.S. (Edin.), and James Hendry, M.A., B.Sc., M.B.; 1923. Edinburgh: E. and S. Livingstone; Royal 8vo., pp. 1026, with 474 illustrations. Price: 35s. net (39s. in Australia).

The Medical Journal of Australia

SATURDAY, JULY 12, 1924.

The Syme Foundation.

THE Council of the Victorian Branch of the British Medical Association has resolved that the occasion of the retirement from active surgical practice of Sir George Syme should be marked by some special and permanent expression of appreciation of the long and valued services which he has given to the medical profession in his own State and throughout the whole of Australia. This resolution must meet with the hearty approval of the medical profession that has benefited so greatly by the important achievement and sterling work of this man of genius. Sir George's influence has extended far beyond the confines of his immediate environment. As a surgeon he has done much to raise and maintain at a high level Australian surgery. As a teacher he has climbed to the highest place in our schools and his popularity and the success that has attended his efforts in this direction stand as a monument of industry and competence. He has advanced the science and art of his calling and has given freely and without stint from a varied and extensive experience. As a medico-politician he has taken a leading part and his sane and balanced judgement on matters affecting his profession and the public welfare have received recognition and acknowledgment on all sides. What wonder that such a man as this should have been chosen by his compeers to fill the most important positions they had to give. He has held the first place in the Branch of the British Medical Association of which he is a member; he has been selected to be the Chairman of the Federal Committee, the only body within the Association that has representation of all the Branches in Australia; he has been made President of the first session of the Australasian Medical Congress (British Medical Association). Recently when it was announced that His Majesty had created him a knight of the Order of the British Empire, we reminded our readers that he is acknowledged as the leader of the medical profession in the Commonwealth. And as the Council of the Victorian Branch has determined, the occasion of his retirement from his busy surgical engagements is to be the occasion of an expression of appreciation from his colleagues and pupils. That the response to the invitation of the Council of the Victorian Branch will be spontaneous and unstinted we have no doubt. Not only from Victorian practitioners will there be a hearty response.

The mark of appreciation is to take the form of a portrait by an eminent artist to hang in the home of the Victorian Branch and of the institution of a foundation, to be called the Syme Foundation for the advancement of surgical science. There have been several endeavours within recent times to further the interests of science in honour of men who have achieved fame in the world of medicine. It has not yet been decided whether the form of this foundation shall be the endowment of research in surgical science or some less ambitious undertaking. The medical profession must determine this by the number and size of their contributions. There are many cogent reasons why a special effort should be made to provide a fund sufficient for the purposes of research. It is true that a research institution of a national character cannot be founded on the subscriptions collected in this manner from the members of the medical profession. Australia is still awaiting the millionaire who will emulate the generosity of John D. Rockefeller or Lord Iveagh. But smaller means may result in valuable progress and the initiative of the medical profession must stimulate the rich men outside its ranks to follow the example. It should be remembered that the practitioner of medicine, be he specialist or one of the rank and file, relies on the researches of clinicians, pathologists, physiologists and other investigators for the greater part of his knowledge. It is quite anomalous that the laboratory worker is usually paid a mere pittance and that he passes on the results of his work to his practising colleagues who earn considerable fees by the application of his discoveries. It is becoming increasingly diffi-

cult to enlist the services of competent and trained research workers, because the remuneration is trifling as compared with the incomes earned in general or special practice. In other branches of life the discoverer sells the fruits of his labours. In medical affairs all knowledge gained in research is distributed as a gift to the community. Surely this is a strong argument in favour of generous support by the practising members of the medical profession to such an undertaking as the institution of the Syme Foundation.

There is still another aspect of this subject that should be mentioned. Sir George Syme has devoted many years to the study of surgery. He has made himself a master of its art and an able exponent of its science. There can be no question that he would prefer to see the foundation bearing his name dedicated to research than used to reward a student for ability and diligence or to defray the cost of an annual lecture. We would therefore urge the members of the medical profession to repay a portion of the debt they owe to the research worker in honour of the Melbourne master.

Current Comment.

MASSIVE PULMONARY COLLAPSE.

AT a meeting held recently by the New South Wales Branch of the British Medical Association at the Royal Prince Alfred Hospital, Dr. G. R. Halloran related how he had been compelled to employ a difficult device to invert a detached gold tooth crown in a main bronchus of a woman before he could remove this obstacle to respiration. He remarked that it was scarcely conceivable that the obstruction was complete, since there were no signs of collapse of a lobule, lobe or whole lung. He therefore assumed that in spite of the apparent sealing off of the lung tissue supplied by the bronchus, there must have been a small airway which permitted both ingress and egress of air into the lung. There appears to be some clinical evidence to support the hypothesis that when an obstruction is situated in a bronchus in such a way that it acts as a valve and permits the entry, but not the expulsion of air, emphysema results. The late W. F. Litchfield and Dr. J. Macdonald Gill made a study several years ago of the lungs of children who had died of asphyxia in the course of attacks of diphtheria. They found that when the larynx, the trachea or the bronchi were obstructed by membrane or fibrinous material, there was always some lobular emphysema, at times some interstitial emphysema and only a few areas of limited extent of lobular collapse. Of course, it must be acknowledged that the obstructing membrane may have been lodged in such a manner as to form a sort of valve. On the other hand death in these children resulted from asphyxia and it is therefore unlikely that in a series of cases inspiration could continue, but not expiration. The observations, however, may not be accepted as direct evidence of the effect of pure bronchial obstruction, since added to this there was a dangerous infection by an organism which produces a definite exotoxin. Litchfield reported in 1918 findings in the case of a woman who had died of asphyxia the result of a fibrinous plugging of the large and small bronchi in the course of a fibrinous bronchitis. Here again there was an added infection, but the lobular emphysema found could not have resulted from a valve-like action of the obstruction. There is substantial reason to conclude that the mechanical obstruction of a bronchus leads rather to emphysema and congestion associated with engorgement of the pulmonary vessels than to a collapse of the lung or lobe. More than a third of a century ago William Pasteur observed massive pulmonary collapse in children dead of diphtheria and described this condition in minute detail. He contended that the collapse was the outcome of a diaphragmatic paralysis. Some years later he called attention to a form of massive pulmonary collapse which occurs not infrequently after operations and which is not often fatal. Since that time ample skiagraphic or skiascopic evidence of post-operative massive pulmonary collapse has been produced and published to compel the acceptance of this condition as a relatively common one. It has been pointed out that it is easily overlooked and that only those who look for its signs and symptoms, are convinced of its frequency. Dr. Simon S. Leopold has recorded its occurrence in four patients who were under treatment at a base hospital in New Jersey within the period of sixteen days.[1] He depicts the extent of the collapse and the gradual return to normal expansion of the lung by means of skiagrams taken at intervals. With the physical and clinical signs we need not concern ourselves at present. In all his patients recovery ensued. Dr. Leopold controverts Pasteur's contention that post-operative masive pulmonary collapse is an active collapse of the lung, the result of a deflating force, such as paralysis of the diaphragm and the intercostal muscles. He strengthens his argument by denying the alveolar walls all contractile power and by showing that Briscoe and others have produced paralysis of the diaphragm without causing collapse of the lung. He believes that the collapse is due to bronchial obstruction and endeavours to support his view on the experimental work of Lichtheim who introduced laminaria tents into the bronchi of rabbits without opening the pleura and thus brought about pulmonary collapse. When the pulmonary vessels are tied, so that the circulation and respiration are arrested simultaneously, no collapse occurs. It is possible that in obstructive asphyxia when the

[1] *The American Journal of the Medical Sciences*, March, 1924.

right side of the heart is embarrassed, as is frequently the case in diphtheria and fibrinous bronchitis, emphysema results because the blood is incapable of absorbing and removing the oxygen from the alveoli. On the other hand when the obstruction is purely mechanical and when there is no immediate arrest of the pulmonary circulation, the early result is the absorption of the air in the alveoli. Later, if the obstruction persists and is of such a nature that the greater part of the respiratory surface is deprived of its air supply, the lung becomes water-logged, the left side of the heart tires before the right and the collapsed lung after death appears wet and heavy. Litchfield insisted on the doctrine that in dry asphyxia the dyspnœa is predominantly inspiratory, owing to the negative atmospheric pressure in the lungs; that blood is sucked into the thorax until the right side of the heart is filled to bursting point and that the left ventricle continues to beat. On the other hand he enunciated the hypothesis that in drowning the dyspnœa is mainly expiratory owing to the violent efforts to overcome the obstruction caused by the water striking the larynx. The right side of the heart does not become so engorged that it cannot continue to beat; the left side fails as a result of the increase in the blood pressure in the systemic arteries. This hypothesis is not fully in accord with the facts observed in massive pulmonary collapse. If the collapse in complete obstruction is dependent on the maintenance of an active pulmonary circulation, Litchfield's dry asphyxia cannot be explained on the assumption that "the thorax is sucked dry of blood." It would be more logical to assume that there is stasis of blood in the pulmonary vessels and that collapse is prevented because this stoppage of the blood's progress deprives it of the power of removing air from the lungs. Dr. Leopold announces that he is seeking an opportunity of ascertaining by direct bronchoscopy whether or not there is a complete bronchial obstruction in post-operative massive pulmonary collapse. If he can adduce this evidence, it will be necessary to continue observations both in the clinic and on the mortuary table to discover the mechanism of collapse when it occurs in disease or after gun shot wounds.

SPLENECTOMY IN PURPURA HÆMORRHAGICA.

THE only constant abnormality found on the examination of the blood of patients suffering from *purpura hæmorrhagica* is a decrease in the number of the blood platelets. This decrease is sometimes so noticeable that the platelets may be regarded as almost non-existent. Hayem and Denys were two observers who established this fact. In view of this determination efforts have been made to elucidate the problem of the ætiology of the disease by ascertaining the cause of the diminution. It will be evident at once that there are only two possibilities. Either the platelets are not produced in normal numbers or else their rate of destruction is greatly accelerated. In regard to the platelets themselves comparatively little is known. It is curious how small an amount of space is devoted to their consideration by the authors of text-books. Platelets are formed by the megakaryocytes in the bone marrow and take an active part in the coagulation of blood. The difficulty in counting them is not inconsiderable and various statements have been made as to what may be looked on as a normal number. It is stated in Allbutt and Rolleston's "System of Medicine" that they average about 500,000 per cubic millimetre. Earlier estimates were 200,000 and 300,000. The association of blood platelets and *purpura hæmorrhagica* was demonstrated by Lee and Robertson in 1915. They prepared an antiserum for blood platelets and found that it had a strong agglutinating and lytic action on guinea pig platelets. This reaction did not occur in the absence of complement and injection of anti-platelet serum into guinea pigs produced a condition identical practically in every way to the acute form of *purpura hæmorrhagica* as seen in man.

The subject of *purpura hæmorrhagica* has been recently discussed from the point of view of treatment by Dr. I. Cohn and Dr. I. I. Lemann.[1] They refer to the work of many observers on the blood platelets and their relationship to the disease. They point out that Frank, of Breslau, held the view that the platelets were not formed in normal quantity and called the disease essential thrombopenia. Kaznelson on the other hand held the view that there was an excessive destruction of platelets which were formed in normal numbers. Both these workers came to the conclusion that splenectomy was indicated in the treatment of the disease. Drs. Cohn and Lemann state that there is sufficient evidence for the belief that splenectomy in this disease is a scientific and not an empirical operation. They quote opinions from many writers in regard to the involvement of the spleen as the organ which destroys platelets and add that "it is plausible and rational" to believe that the spleen and other members of the spleen apparatus by hyperactivity cause a destruction of blood platelets and that therefore splenectomy is the logical treatment. They cannot be regarded as having proved the scientific basis of the operation as opposed to the empirical. They report the history of a patient suffering from *purpura hæmorrhagica* whose spleen was removed on June 6, 1923. The illness at this time was of four months' duration. After removal of the spleen signs of the disease disappeared and no recurrence had taken place on December 15, 1923. Platelet count before operation was by smear only and their presence was only "occasionally noted" in the smear. On July 2 they numbered 400,000 per cubic millimetre and on July 25, 1923, 145,000. On October 15, 1923, they numbered 200,000. After splenectomy the number of erthyrocytes and of leucocytes increased as would be expected.

Although splenectomy has been carried out with success by other workers in this field, it must be remembered that *purpura hæmorrhagica* is a disease in which remissions and even spontaneous cure have been known to occur. Success after splenectomy does not necessarily mean that the spleen is primarily at fault in the production of the disease.

[1] *Surgery, Gynecology and Obstetrics*, May, 1924.

Abstracts from Current Medical Literature.

SURGERY.

Treatment of Cranial Injuries.

J. STEWART RODMAN AND B. B. NEUBAUER (*Annals of Surgery*, April, 1924) discuss the treatment of cranial injuries and suggest a new classification determined by the manometric readings of the intra-cranial fluid pressure. This pressure is read from the spinal manometer while lumbar puncture is performed. Patients are thus divided into three classes: (i.) Those with no increase in intra-cranial tension, (ii.) those with moderate increase and (iii.) those with definite increase. The advantage claimed for this classification is that each class definitely indicates a slightly different line of treatment. In order that the particular group into which a patient falls, may be determined, the following observations are made: (i.) General examination, (ii.) observations of pulse, temperature, respiration and blood pressure every four hours, (iii.) an X-ray examination of the skull, (iv.) lumbar puncture with the use of the spinal manometer to indicate the pressure. The normal pressure is put down as eight to ten millimetres of mercury. The indications for treatment vary with the clinical groups. Thus in those with normal pressure it is non-operative with rest, ice cap and sedatives. In the group with a moderate increase in pressure (from ten to eighteen millimetres of mercury) the treatment is again non-operative with rest, ice cap, elevation of the head and repeated daily lumbar puncture. In the third group with a definitely increased pressure (above eighteen millimetres of mercury) operative treatment is indicated for relief of tension. The authors favour sub-temporal decompression, bilaterally if necessary.

Malignant Tumours of the Thyreoid.

W. P. HERBST, JUNIOR (*Annals of Surgery*, April, 1924) after studying a series of two hundred and ninety cases of malignant tumours of the thyreoid collected in the Mayo Clinic over a period of twenty years (1901-1921) concludes that the descending order of malignancy is sarcoma, carcinoma, malignant adenoma and malignant papilloma. He thinks that operation before the malignancy has infiltrated the capsule of the gland offers the best hope of permanent cure. Diagnosis of malignancy in this stage is of course very seldom made from the clinical manifestations. Operation for malignant papilloma, either in conditions that look quite hopeless owing to their extent, often yields permanent though unexpected cures. There is no need to fear myxœdema even in patients that need total extirpation of the gland, as thyreoid extract and thyro-toxin replace the needful elements. The author cannot speak with authority of X-ray and radium treatment yet as they have not been in use long enough. With regard to metastases the lungs and liver are the commonest sites, secondary deposits in bone being very rare. He considers that the posssibility of the occurrence of malignant changes in adenomatous tumours in patients in the fifth decade should be used as a decided argument in favour of operative treatment of these lesions.

The Surgical Complications of Diabetes.

MORRIS WEEDON (*The Journal of the American Medical Association*, April 12, 1924) endeavours to determine roughly what the improvement should be in the mortality rates of the surgical complications of diabetes on account of the introduction of "Insulin." He takes the figures of the New York Hospital from 1897 to 1922 (when "Insulin" was first used) and then from 1922 to the present date and then compares the two tables. After excluding from these all patients who died as the result of surgical conditions and not from the diabetes itself, he comes to the conclusion that the present mortality rate should be about 8.7% as compared with a previous rate of 36.8%, *id est* a reduction of 28.1%. He points out that certain patients such as those with gangrene or those who were in a comatose state must surely have died but for the use of "Insulin" and estimates that in the series studied by him, from 1897 to 1922, there were forty-five patients who come under this category and could have been saved by "Insulin" treatment.

Post-Operative Complications of Double Inguinal Hernia.

J. C. HUBBARD (*Boston Medical and Surgical Journal*, May 27, 1924) in discussing the post-operative complications of double inguinal hernia, states that the two most important are sepsis and pulmonary complications. He raises the question as to whether there is any additional risk of these complications ensuing after operation on both sides of a double hernia at one sitting rather than on two separate occasions. In considering a series of two hundred and sixty-four patients operated on by a group of surgeons he finds the rate of the occurrence of sepsis to be 12% in single-sided hernia and 13% in double hernia. He thus claims that there is no increase in the danger of sepsis by doing both sides at once. In regard to pulmonary complications, however, the reverse is shown to be the case. Thus in the single hernia pulmonary complications occurred in 3.8%, but in double hernia (both sides being operated on at one sitting) the rate was 20%. The reason may perhaps be that the patient was twice as long under the anæsthetic, but the author does not think this to be the cause. He attributes the pulmonary complications to thrombi and emboli from the double operation areas. The conclusion therefore is that owing to the definitely greater risk of pulmonary complications double inguinal hernia should be done in two sittings rather than in one.

New Incision for Clavicle Operations.

ROBERT SOUTTAR (*The Journal of the American Medical Association*, April 12, 1924) describes a new incision used by him when operating for cosmetic reasons on definite deformity of the clavicle caused by malunion of a fracture sustained early in life. This incision would be of no use in all operations in the supra-clavicular region, lower part of the neck, upper part of the chest and outer sternal regions. The incision extends from the spine of the scapula posteriorly (at about the level of the outer end of the clavicle) upward over the shoulder and downward anteriorly to the level of the fourth rib just internal to the anterior axillary line and then at right angles for two and a half centimetres inwards. The whole can be covered by the shoulder strap of an evening dress. The skin and subcutaneous fat in his operation were dissected from the pectoral muscle and laid back. He resected the middle of the clavicle and replaced it with a bone graft. He claims that his incision gave him complete exposure of the clavicle from the mid-sternal line to the acromion. No scar is left on the neck or the pectoral region which cannot be covered by the shoulder strap of a dress.

New Growth in Undescended Testicles.

FRED B. LUND (*Boston Medical and Surgical Journal*, March 27, 1924) discusses the prevalent belief that new growths are more common in undescended testicles than in the normally situated testicles and comes to the conclusion that the belief is well founded and proven. He claims that the issue is important as it has a bearing on the decision as to whether or not these testicles should be left or removed when seen in practice. His own experience included four cases in which definite malignant disease was established and he describes these four in detail. John H. Cunningham has collected records of four hundred and fifty-two cases of malignant tumours of the testicle at the City Hospital and in the literature. Fifty of these were in undescended testicles. Figures from examination of conscripts are quoted to show that cryptorchids constitute normally about 0.2% of the population. Therefore in four hundred and fifty-two cases there should only be less than one instance of malignant tumour in undescended testicles, whereas in Cunningham's figures fifty cases occurred. The author therefore claims that the contention that malignant disease occurs more frequently in undescended than in normally situated testicles is well founded. In considering the procedure to be adopted in operating on any instance, sufficient weight should be given to

this fact and also to the other facts of age of patient, general health, presence or absence of a normal testicle, whether the accompanying hernia can be properly cured without the removal of the undescended testicle and whether, if left, the testicle can be brought far enough down into the scrotum to stay there with comfort to the patient.

The Treatment of Fractures.

FRED R. FAIRCHILD (*California and Western Medicine*, April, 1924) in discussing the present outlook on the treatment of fractures offers practical suggestions which are the result of his own experiences. Open operation is now much less in vogue than formerly. He traces the types of procedure adopted during the past two decades and points out that fifteen years ago bone plating was considered the best method of treatment. Then came bands and wires and other mechanical internal supports and later on bone grafts. But now the consensus of opinion favours open replacement of fragments without the use of any foreign material. Each method is suitable to different patients, but open operation of any sort is now much less frequently resorted to than formerly owing to better results being obtained with conservative splinting methods. In this connexion he eulogizes the Thomas splint as the most suitable for treatment of fractures of long bones in that it best secures extension and fixation of fragments with at the same time freedom for the body, exposure of the fracture site and good ocular and X-ray observation. He advises that each patient should have his Thomas splint "made to measure," to fit his own particular shape. He uses moleskin plaster straps for extension and does not attempt to reduce the displacement until after extension has been applied for about five days, when he claims that coaptation of fragments is more easily secured even without an anæsthetic. No open operation for fractured femur has been performed in his clinic since the war, quite satisfactory results having been obtained by the above method. In fractures of tibia and fibula the Thomas splint is also used, extension, if necessary, being secured by traction through a Sinclair skate attached to the soles of the feet with celluloid acetone solution. Fractures of radius and ulna (which he describes as the most troublesome fractures of all to keep in position) are treated also by traction and extension in a Thomas splint with very good results. Compound fractures also lend themselves readily to this method of treatment. Suspension to overhead frames is not necessary in all instances. He avoids using any foreign material if possible in open reduction of fractures, but has good results with mere reposition of fragments and removal of intervening soft tissue and subsequent use of a Thomas splint. In ununited fractures he has had the best results with bone inlays either of sliding or massive graft type. If manipulation under anæsthesia fails to replace the fragments and gives easy movement of the joint, fractures of the lower end of humerus are subjected to open reduction without any application of any foreign material and put up in Jones's position with excellent results.

Chronic Duodenal Stenosis.

JAMES MCKENTY (*Surgery, Gynecology and Obstetrics*, April, 1924) discusses the operative findings in the condition of chronic duodenal stenosis and suggests suitable treatment. He found at operation dilatation of the duodenum throughout its whole length from the pyloric ring to the point where it is crossed by the superior mesenteric artery. Narrowing of the angle between the superior mesenteric artery and the aorta is sufficient to obliterate the lumen of the bowel at this point. On elevating the root of the mesentery by the finger, the gas within the duodenum is seen to pass on into the jejunum which was previously collapsed. Palpation of the duodenal wall gave the impression in some instances that the wall had undergone hypertrophy. The author holds that gastroptosis is only a minor factor in the causation and that a loose caecum with an elongated parieto-colic fold, getting its support from the mesentery of the small bowel, is the most important cause of mesenteric compression of the duodenum. Chronic duodenal obstruction must be added to the list of conditions underlying "chronic dyspepsia." Symptoms of a chronic toxæmia, particularly headaches relieved by the vomiting of bile, the so-called "bilious attacks," when occurring in individuals the subjects of visceroptosis, are the most significant. Chronic disease of the appendix and the gall bladder was the pre-operative diagnosis in most of his patients and usually disease of these structures was also found. Radiographic examination is the most important diagnostic means. Non-operative treatment consists in the use of corsets and abdominal belts designed to support the prolapsed viscera. This always affords a measure of relief. Prolonged rest in the dorsal position may be injurious. Operative treatment has changed from the usual but unsatisfactory gastro-enterostomy to that of duodeno-jejunostomy, as was first suggested by Professor Barker, and to the suspending the prolapsed caecum by a few sutures.

Seminal Vesiculitis After Prostatectomy.

MONTAGUE L. BOYD (*Surgery Gynecology and Obstetrics*, March, 1924) describes methods of preventing infection of the seminal vesicles after prostatectomy and suitable treatment for the condition, if it arises. The inflammation arises through an extension of an infection from the prostatic wound, though a chronic infection may exist before operation. Such a vesiculitis is capable of producing in the acute stages an epididymitis and also chills and fever. A high temperature ascribed to pyelitis, cystitis and infected prostatic wounds is sometimes seen, pain in the lower portion of the abdomen, testicles, perineum and rectum is generally present and by keeping up a posterior urethritis causes discomfort during and frequency of micturition. An epididymitis is at all times sufficient evidence of the existence of a vesiculitis. Steps should be taken before operation to prevent this complication. It is necessary to allay the inflammation of the bladder and the urethra and any pre-existing seminal troubles and also to improve the patient's general health. By these means his resistance is increased. At the operation the posterior part of the prostatic urethra is torn across before the enucleation is begun so that the urethra in the vicinity of the ejaculatory ducts will be injured as little as possible. Unnecessary roughness in handling the peri-prostatic tissues will spare devitallizing the wound tissues. After operation free bladder drainage prevents distension of the bladder which is apt to cause extravasation about the wound. Emptying the seminal vesicles by massage is a difficult and even dangerous proceeding in these patients when attempted shortly after operation, but some weeks after operation there is less danger and then massage, irrigations of the bladder and urethra, hot rectal irrigations and in some cases instrumentation of the urethra and injection of the vesicles by vasotomy may be employed.

A Bio-Chemical Law Governing Surgical Mortality.

GEORGE W. CRILE (*Surgery, Gynecology and Obstetrics*, April, 1924) delivered the Murphy Oration for 1923 on formulating a bio-physical law governing surgical mortality. He concludes that electricity is detected in every living plant or animal and is absent in the dead. Electricity is manifested in every act of the living and is probably the so-called vital spark. The source of electricity in the cells is oxidation and there are a great number of different kinds of electric circuits in animals. He holds that oxidation is initiated and controlled by electricity and that the electricity is accumulated on the lipoid films of the trillions of cells. Each of these cells is a diminutive electro-chemical unit. During life there is a difference of potential, a want of balance within the organism and death signifies an equilibrium of potential. There is a universal pattern of the living in the form of bipolarism, it exists in the non-living also and the pattern runs in continuity from atom to man. He says that man is an electro-chemical mechanism, a giant amœba climbing up the slippery banks of time. Sleep being a negative phase cannot be compelled. For the optimum operation it is necessary to maintain an optimum difference of potential which the author attempts to do by adhering to the principles as above.

British Medical Association News.

SCIENTIFIC.

A MEETING OF THE NEW SOUTH WALES BRANCH OF THE BRITISH MEDICAL ASSOCIATION was held at the Chamber of Commerce Rooms, Newcastle, on May 9, 1924, DR. ANDREW DAVIDSON, the PRESIDENT, in the chair.

In his opening remarks Dr. Davidson expressed his satisfaction at the fact that after an interval of three and a half years an ordinary meeting of the Branch was being held at Newcastle. He thought that such meetings would help the members of the Branch to know each other better and to keep in closer touch with the Branch. He hoped that the interval between the meetings at Newcastle would not be so long in the future.

Ante-Natal Supervision.

DR. F. BROWN CRAIG read a paper entitled "Ante-Natal Supervision" (see page 25).

DR. J. ADAM DICK, C.M.G., said that he wished to ask Dr. Craig how long it took to carry out the examination he had described, in *primiparæ* and *multiparæ*. He also wished to know whether any forms had been prepared on which records could be kept and, if so, whether such forms were available. He was quite at one with Dr. Craig in regard to the importance of the subject. The figures were very striking and showed that supervision had achieved wonderful results. He thought that the number of patients admitted from the out-patient department to the wards required some explanation. If it were an out-patient clinic, why were so many patients admitted to the wards? He thanked Dr. Craig for what he regarded as a most interesting paper.

DR. W. NICKSON, SENIOR, said that he thought there had been no advance in medical science during recent years to equal the recognition of the importance of ante-natal supervision. Attempts had been made to introduce adequate supervision of patients before confinement in the Newcastle district and it had been found that if the patients came under observation at a sufficiently early stage, much morbidity could be avoided. He thought that the most important duty of medical practitioners was to induce women to submit themselves to examination during the early stages of pregnancy. There were two distinct types of patient, those who sought the medical practitioner at an early stage and those who were nursed at their own homes. The majority of women belonged to the latter group. It was this group of patients which made medical practitioners think furiously. The doctor frequently did not see the patient till the toxæmia had become well advanced. When he saw the patient he recognized the severity of the condition and sent the patient to hospital, but it was often too late to do anything. It was important to get the patient early when minor disturbances only were present—headaches, indigestion and disturbances of vision. A great deal could be done then. When the patient came under observation in a hopeless state of intoxication it was difficult to do much for her. In this connexion Dr. Nickson said that he would have liked to have heard more from Dr. Brown Craig on the subject of acute toxæmias of pregnancy. It was extraordinary how acute and lethal the poisoning could sometimes be. He had seen a patient and more than one who had had a single fit and died. This did not happen so frequently at the present time. There were two reasons for this. The first was that medical practitioners had been trained to recognize the early signs of trouble and the second was the advent of the trained nurse. Dr. Nickson thought that it would be advantageous if some form of post-graduate instruction could be arranged for nurses. They could not altogether blame women who had such a short course of training, if they became lax. They should be encouraged to keep an eye on the patient. He was glad that Dr. Craig had referred to the difficulty of estimating the position of the child by palpation after labour had started. It was often hard to be sure of the anterior shoulder. When the medical practitioner was not called in early and this frequently occurred, mistakes were easy to make. Personally he laid more stress on the relationship between the size of the head and the pelvis than on other measurements. He thought that there was a tendency for the head of the Australian baby to become larger and harder. It had been estimated by some observers that the average weight of a fœtus at full term was 2.9 kilograms (six and a half pounds). In his own last thousand confinements the weight of the child had averaged 3.8 kilograms (eight and a half pounds). He thought that some of the English wives who came to Australia, had smaller babies. Another difficulty met with in practice was to get women to go and see the doctor. This could only be done by propaganda work. If this were kept up long enough, the people would learn. He thought that every hospital should have maternity wards attached. It was a great pity that the obstetric hospitals in Sydney were so small. What was required was one large hospital in which statistics could be compiled. The existence of such an institution would make it possible for medical practitioners to undertake periods of post-graduate study when they wished to do so.

In conclusion Dr. Nickson referred to the miserable position held by obstetrics in the teaching of students. It should occupy as important a position if not a more important position in the curriculum than surgery. When a student graduated, he should be in a position to give a high class of attention to a patient in labour.

DR. A. C. ARNOLD thanked Dr. Craig for his paper. He spoke for those who did not find diagnosis by palpation an easy matter. It was very difficult to make a diagnosis in dealing with a patient with a fat abdominal wall. He asked Dr. Craig what means were undertaken in an ante-natal clinic to correct malpositions. He asked how a *placenta prævia* could be diagnosed and wanted to know what significance was attached at the Royal Hospital for Women to the presence of a slight albuminuria and what steps were taken to control such a condition.

DR. C. A. F. CLARK thanked Dr. Craig for his very interesting paper. He thought that the figures which had been quoted, demonstrated the importance of the subject. He asked Dr. Craig what treatment was undertaken for the severe vomiting of pregnancy. He referred to the difficulty which was experienced in a locality such as the Newcastle district in carrying out frequent examinations of urine. All the work fell on the medical practitioner and it was difficult to make weekly examinations. He referred to the history of one patient in whom urinary examinations had been carried out at monthly intervals. Two weeks after an examination the patient had become comatose, had had one fit and had died. He thought that urinary examinations were most important in dealing with *primiparæ*. He would have liked to have heard more in regard to treatment.

DR. H. L. KESTEVEN said that he wished to support Dr. Nickson's plea for a better nursing service and for a tightening up of the regulations dealing with midwives. He thought that midwifery nurses frequently "suffered from swelled head." He knew of one who considered herself competent to use forceps and always carried them as part of her equipment. It was very difficult to make any nurse keep a daily record of the patient's temperature. In England if a nurse failed to take a patient's temperature and was twice reported for neglecting to do so, her name was removed from the register. Dr. Kesteven also referred to the incapacity of the average new graduate in medicine in regard to obstetrics.

DR. I. MORGAN said that he quite agreed with Dr. Nickson and Dr. Kesteven in regard to the teaching of obstetrics. Every teacher in the medical school added something to the load which the student had to carry. It would be better if there were less cramming, if the student were taught to observe and to think more. More time should be devoted to the teaching of obstetrics. He thought that obstetric fatalities were generally due to imperfect training. He asked Dr. Craig whether any routine examination was undertaken at the Royal Hospital for Women in regard to the Wassermann test and if so what form of ante-natal treatment for syphilis was adopted. Dr. Morgan referred to several patients whom he had treated for syphilis during pregnancy. One patient had been treated from the third month onwards witht ten injections of "Novarsenobillon." The child was two and a half years old and

perfectly well. In another instance five injections of the same drug had been given at the fourth month of pregnancy and the child was well and free from any signs of the disease. Dr. Morgan then referred to the value of X-rays in obstetric practice and to their value in differentiating between fibroid tumours and the pregnant uterus.

DR. F. BROWN CRAIG in reply said that if he were to supply an adequate answer to all the questions which had been asked him, he would be able to produce a text-book on midwifery.

In reply to Dr. Dick he said that the examination of patients was not a lengthy procedure. As the examiner became more familiar with what was required, less time would be occupied, for certain things could be excluded. They found in hospital work that an examination occupied less than ten minutes. Record sheets were in use at the Royal Hospital for Women and were being modified to suit special requirements. They were available at the hospital. In this connexion he replied to Dr. Nickson that arrangements were being made between the Royal Hospital for Women and the Women's Hospital, Crown Street, to introduce a uniform method of history taking for the two institutions. In reply to Dr. Dick's remarks about the percentage of admissions, he said that in the Pre-Maternity Department all the patients were not abnormal. Many of them were admitted for observation and quite a number of these were normal and were used for teaching purposes. Patients with gross albuminuria were always transferred to hospital.

In reply to Dr. Nickson Dr. Craig said that he wished again to lay stress on the importance of examination before the onset of labour. With reference to Dr. Arnold's remark he agreed that palpation was difficult in a fat subject, but it could be done. It was necessary to take into consideration the results of the examination as a whole together with the location of the fœtal heart sounds before making a diagnosis of position. He thought that Dr. Nickson's suggestion in regard to post-graduate instruction to nurses was excellent. Dr. Nickson had also mentioned English brides. Dr. Craig said that if he heard a North Country accent in the Pre-Maternity Department he was always very careful to make a thorough examination of the pelvis. He often found contractions for many of the women were poor physical specimens and had flattened pelves. In regard to morbidity in general they were trying to attack the subject from the preventive aspect so that it would be impossible for the mother to fail in the recognition of early symptoms. If the mother could not give birth to a child without injuring herself, it was a sign for the induction of labour.

In reply to Dr. Arnold Dr. Craig said that the correction of malposition was a big subject, but external version could be performed if the patient was seen early. It would depend on the results obtained from capacity tests and on the response to manipulation treatment. If it was impossible for the head to pass, it was better to treat symptoms and either induce labour or perform Cæsarean section at a later stage. It was sometimes posible to convert an occipito-posterior into an occipito-anterior presentation by Buist's method of using towel pads (*The British Medical Journal*, November 12, 1921, page 782, and November 4, 1922, page 845). The constant pressure would often have the desired effect. The early diagnosis of *placenta prævia* could be made by no other way than by an internal pelvic examination. A *placenta prævia* could be felt after the seventh month of pregnancy. A boggy feeling was generally present in the fornix and the site was unsually vascular. In discussing the question of faint albuminuria Dr. Craig said that any albuminuria during pregnancy was a serious matter. It was necessary to sound an alarm, but not always to the patient. She should be kept under observation, if possible in hospital, for albuminuria was always a loaded bomb.

In reply to Dr. Clark Dr. Craig said hyperemesis of the toxæmic type might be so severe as to become an indication for the termination of pregnancy. Sometimes the patient would recover if she were given an excess of carbo-hydrate. If this had no effect, it might be necessary to induce labour. There was no way of getting over the difficulty of the weekly urinary tests. The trouble must be taken and it should be done every week. A little preaching to *primiparæ* in regard to prodromata often did good.

Dr. Craig appreciated Dr. Kesteven's difficulty. The Council of the New South Wales Branch of the British Medical Association were fighting hard to secure the introduction of a midwives' act. There was one "on the stocks," but it was apparently very hard to launch.

In reply to Dr. Morgan Dr. Craig said that they always watched for gross signs of syphilis, the history was investigated and in those patients arousing suspicion a Wassermann test was carried out. It was not always possible to have "Arseno-benzol" injections carried out in a maternity hospital, but these patients did very well on iodide of potassium and mercury. Such patients were properly transferred to a general hospital for treatment. X-ray diagnosis was of value and much would come of it. It was questionable whether pelvimetry by means of X-rays would be reliable. In any case it would require a vast amount of technical skill to obtain results as satisfactory as those obtained by an experienced obstetric observer. Fingers, if trained, were the best guide.

In discussing the teaching of obstetrics Dr. Craig said that the whole question resolved itself into one of money. The University authorities always said that they had no money to spend in additions to the medical curriculum. Much, however, had been done. Dr. Craig said that he had great respect for Dr. Windeyer's work. He had done much for the teaching of obstetrics and had been instrumental in securing the appointment of three tutors in the subject. These teachers, appointed eighteen months previously, took small classes of students for clinical instruction for three weeks before they came into residence. The examiners at the recent degree examinations had found that the candidates had a better knowledge of the subject than formerly. In the next couple of years the curriculum would be increased to six years to bring it in line with the requirements of the General Medical Council of Great Britain. Under this arrangement students would be required to spend three months in residence at an obstetric hospital instead of six weeks (three weeks' tutorial instruction and three weeks residence) as at present.

Abdominal Conditions in Children.

DR. R. B. WADE read a paper entitled "Some Abdominal Conditions in Children" (see page 28).

DR. HOWARD BULLOCK said he had been privileged to operate on a considerable number of patients with intussusception at the Renwick Hospital for Infants. He had been brought up on the usual text-book description of the condition, that blood was soon passed and shortly afterwards a mass could be felt *per rectum*. He had operated on a patient when no blood had been passed, yet an intussusception had been reduced at operation. Clubbe mentioned this possibility in his well known monograph. Dr. Wade had pointed out that when a mass could be palpated *per rectum* the patient was usually *in extremis;* with this he concurred. It was generally taught that when intussusception took place one normal motion might be passed before the passage of blood and none afterwards, but he had recently operated on a child who had passed a blood-stained stool. The bowel had then been washed out and more blood-stained fæces removed; the child had then passed a normal motion. He was deeply indebted to Dr. Wade for his excellent and instructive paper.

In regard to congenital pyloric stenosis his experience had been limited to a few cases and he had been impressed by the large size attained by the pyloric sphincter. He considered that success in these cases depended on an early diagnosis and early operation.

At the Renwick Hospital during ten years of operative work it was interesting to note that no case of pneumococcal peritonitis had come under his notice and thus Dr. Wade's contention of age incidence had support as only infants up to the age of two years were admitted.

DR. J. ADAM DICK, C.M.G., asked Dr. Wade what was his experience of cases of intussusception in which the child was not collapsed. Sometimes the child continued to scream and doubt would exist as to the diagnosis.

DR. J. W. SMITH thanked Dr. Wade for his paper and asked what was Dr. Wade's experience of reduction by manipulation. Dr. Smith had seen two intussusceptions reduced in this way.

DR. WADE in reply referred to Still's paper on congenital pyloric stenosis. Still had written from the physician's side. He had quoted figures which were interesting to analyse. He had obtained better results with surgical than with medical treatment. Many of his hospital patients had died and those treated in private practice had recovered. No reason for this had been forthcoming. It was interesting to see that for those treated surgically three or four different methods were used. These had included Loret's operation of dilating the pylorus after gastrectomy and gastro-enterostomy. A few had been done by Rammstedt's operation. Some years previously, among about five hundred reported cases there had been a recovery percentage of forty-nine treated medically and fifty-one treated by surgical means. Dr. Wade pointed out that the majority of patients submitted to surgical treatment were the deadbeats of medical treatment. If a percentage equal to that obtained by medical means could be obtained by surgical means in this class of patient, the percentage of recovery would be much higher if all patients were submitted to operation.

In reply to Dr. Smith's question in regard to manipulation, Dr. Wade said that he had seen one or two instances of reduction of intussusception by manipulation occur under anæsthenia. It was not usual, however, and he was reminded of a writer who had stated ten years previously that he had records of some thirty intussusceptions which had been reduced in this way. Dr. Wade thought that this record was as reliable as that of the gentleman who cured all cases of intussusception by belladonna.

In regard to the reduction of intussusception both by manipulation and rectal injection, Dr. Wade drew attention to the danger of recurrence owing to incomplete reduction. In reply to Dr. Dick he said that it was very unusual to see children who continued to scream after the formation of an intussusception. He had seen such an instance. It was wise in this type to give an anæsthetic and examine the abdomen.

MEDICO-POLITICAL.

Transactions of Council of the Victorian Branch.

THE following are the more important transactions of the Council of the Victorian Branch of the British Medical Association during the last six months.

New B.M.A. Buildings.

The Branch meeting had authorized the formation of a company to buy land or buildings. The Council found that it was impossible to float a company successfully with the requisite amount of capital. It approved of a scheme for rebuilding on the present site, sketch plans have been approved and the architects have been authorized to draw out detailed plans and specifications and call for tenders. The question of proceeding further will be determined later.

Repatriation.

The Council agreed to adopt the scheme recommended by the Federal Committee, namely widows and orphans of deceased soldiers and widowed mothers of deceased unmarried soldiers should be treated on the same basis as members of friendly societies.

National Insurance.

A large number of Committee meetings and subdivisional meetings were held in order to ascertain the opinions of members. A *questionnaire* was issued and the replies collated. The Council resolved that it is opposed to the introduction into Australia of any known scheme of national insurance which is now in operation. Sir George Syme and Drs. Newman Morris and Ramsay Webb gave evidence before the Royal Commission.

Country Week.

The Council has under consideration a scheme for a representative meeting to be held in November at which delegates and representatives from all "Divisions" may discuss motions previously submitted by "Divisions" and to hear papers on medical subjects of interest to the general profession.

Retirement of Sir George Syme.

In connexion with the retirement of Sir George Syme from active practice on June 30, 1924, it is proposed to establish a Sir George Syme Foundation and to have executed a three-quarter size oil painting by Mr. John Longstaff which will be hung in the new B.M.A. buildings.

Membership.

From a recent census taken of all medical practitioners in Victoria it has been found that 86% of all practitioners in Victoria and 94% of all those eligible for membership are members of the Branch.

The British Medical Journal.

Members occasionally have asked whether they might be allowed to discontinue taking *The British Medical Journal* and to receive a *pro rata* reduction in their subscriptions to the Association. The matter was referred to the London office and a reply was received in the negative, cogent reasons being given as to why such a policy would be inadmissible.

Social Meetings.

The Council together with members of the Surgical Association entertained members of the Federal Committee at dinner on February 25, 1924. It also entertained at dinner members of the Mayo party on March 27 and the Branch held a reception in their honour at South Yarra. The Council also entertained the recent graduates at a "smoke social" in April.

Ethical Matters.

The Council had occasion to repeat a former resolution that a *locum tenens* who is paid to take charge of a practice during the absence of the principal, should regard himself as under an honourable obligation not to take advantage of his position by subsequently starting in the neighbourhood without the approval of the Council of the Branch.

Relationship of Radiologists to Practitioners Ineligible for Membership.

It has been resolved that it is admissable to examine any patient and to give him or her a written report and diagrams or prints, but not in any way to enter into communication with a medical man who is not eligible for membership of the British Medical Association.

Illegal Operations.

The Committee of the Melbourne Hospital received a letter from the State Coroner calling upon the resident medical staff to notify the police authorities of any case of suspected illegal operation. A previous resolution of the Council couched in the terms of the resolution adopted by the Royal College of Physicians of London was sent to the members of the Staff, namely, that a moral obligation rests upon every medical practitioner to respect the confidence of his patient and that without her consent he is not justified in disclosing information obtained in the course of his professional attendance upon her.

Interference with Treatment.

Attention was drawn to a resolution of the Council that no alteration or addition to the treatment of a patient already under the care of a medical man shall be made by another medical man acting in his capacity for an insurance or other company without first consulting or discussing the matter with the medical man in charge of the case.

Homœopathic Hospital.

It was resolved to take no action against a recent graduate who unwittingly had accepted an appointment at the Melbourne Homœopathic Hospital and it was further resolved that the principles of medical ethics *re* meeting

homœopathic practitioners in consultation do not apply to resident medical officers of the Melbourne Homœopathic Hospital who are members of the British Medical Association. Graduates are now free to accept appointments as resident medical officers of this hospital provided they are members of the Association. The Federal Committee, in view of the fact that homœopathic practitioners are accepted as members of the British Medical Association in England and must if they come to Australia be admitted automatically to membership of the local Branches, will at the request of the Council consider the possibility and advisability of electing homœopathic practitioners as members of the Branch.

Lodge Agreements.

It was learnt that in a country town the medical officers of the lodges had agreed to accept the metropolitan rate of 20s. instead of 25s. The Council insisted that they should conform to the Wasley Award and the friendly societies were equally insistent that there should be no alteration of the Wasley Award. The rate is, therefore, 25s. *per annum*. The friendly societies have agreed that the secretaries shall collect 2s. 6d., the medical examination fee of a candidate for election to a lodge. With regard to juvenile lodges, the Council ruled that it is opposed to the admission of juvenile members to lodges without examination.

Medical Officers of Health.

Where it has been reported that the Shire Councils are not paying the rates recommended by the Public Health Commission, the Council of the Victorian Branch has written to the local council urging it to adopt such recommendation.

Scale of Fees.

The standard scale of fees has been revised and enlarged to cover the whole field of medical science. This scale will be laid before the Branch meeting in July for amendment or adoption.

Diphtheria Medical Officer.

The Council forwarded an emphatic protest to the Melbourne City Council against the small salary of £250 *per annum* offered to and accepted by a full-time medical officer whose duties were to investigate the outbreak of diphtheria within the city.

Central Council.

Dr. T. P. Dunhill was appointed representative on the Central Council of the Group Divisions of Tasmania, Victoria, South Australia and Western Australia for a period of three years.

Victorian Railways Union.

The Railway Union proposed to stop a certain portion of the weekly wage of its members and to give that amount as a donation to the public hospitals in return for free treatment for its members and their dependants. The matter is now under consideration of the Council. This policy would appear to conflict with the regulation that a patient has to make a statutory declaration that he is unable to pay for outside medical attention.

Midwifery.

A committee has been appointed to inquire into the conditions of midwifery work in Victoria. It will report the result of its findings and recommendations to the Council which will then consider what action shall be taken.

Care of Baby.

At the request of the Department of Public Health the two pamphlets issued by that Department—"Care of Baby" and "Notes for Mothers"—are now being revised in the view of more recent knowledge of pædiatrics and obstetrics.

Brackenbury Fund.

A fund has been raised by a few of his admirers in Victoria to supplement that being raised in England for Dr. Brackenbury, who worked so energetically in connexion with national insurance in England.

NOMINATIONS AND ELECTIONS.

THE undermentioned have been elected members of the New South Wales Branch of the British Medical Association:

AIKEN, DAVID, M.B., Bac. Surg., 1909 (Univ. Sydney), Murwillumbah.
BACK, ROBERT FERGUS, M.B., Ch.M., 1923 (Univ. Sydney), West End, Petersham.
BANCROFT, MABEL JOSEPHINE, M.B., 1924 (Univ. Sydney), Royal Prince Alfred Hospital, Camperdown.
BROWN, ULRIC LYLE, M.B., Ch.M., 1923 (Univ. Sydney), Meadowbank.
DIAMOND, LOUIS BERNARD, M.B., 1924 (Univ. Sydney), Bondi Road, Bondi.
HALLIDAY, JOHN HOWELL, M.B., Ch.M., 1923 (Univ. Sydney), Coast Hospital, Little Bay.
HENRY, CLIFFORD, M.B., Ch.M., 1914 (Univ. Sydney), Kenmore, via Goulburn.
KINSELLA, VICTOR JOHN, M.B., Ch.M., 1923 (Univ. Sydney), Royal Prince Alfred Hospital, Camperdown.
MOSS, HENRY ST. LEGER, M.B., Ch.M., 1922 (Univ. Sydney), Lindfield.
PATON, CLIVE NINESS, M.B., Ch.M., 1922 (Univ. Sydney), Royal Prince Alfred Hospital, Camperdown.
TEARNE, JOY DEBENHAM, M.B., 1924 (Univ. Sydney), Mona Vale.
THOMAS, ALFRED STRICKLAND, M.B., Ch.M., 1923 (Univ. Sydney), Mudgee.

THE undermentioned have been elected members of the Victorian Branch of the British Medical Association:

FRASER, STUART, M.B., B.S., 1923 (Univ. Melbourne), 25, Fellows Street, Kew.
HADLEY, KENNETH HOWARD, M.B., B.S., 1924 (Univ. Melbourne), Melbourne Hospital.
LYSTER, ARTHUR EDWARD, L.S.A., 1883 (Lond.), M.R.C.S., 1886 (Eng.), Colac.
O'DONNELL, KENNETH FRANCIS, M.B., B.S., 1924 (Univ. Melbourne), Melbourne Hospital.
PARKER, DOROTHEA LAURA HILL, M.B., B.S., 1924 (Univ. Melbourne), Queen Victoria Hospital.
PINCUS, FABIAN FRANZ, M.B., B.S., 1922 (Univ. Melbourne), North Fitzroy.
ROSS, FRANK COWARD HOPE, M.B., B.S., 1924 (Univ. Melbourne), Melbourne Hospital.
THOMAS, HORACE STUART, M.B., B.S., 1924 (Univ. Melbourne), 35, Baldwyn, Road, Canterbury.
WEBB, ARTHUR LIONEL BRIDGES, M.B., B.S., 1924 (Univ. Melbourne), Broadford.
WEIGALL, GERALD RALEIGH, M.B., B.S., 1924 (Univ. Melbourne), St. Kilda Street, Elsternwick.
WILLIAMS, JOHN FRANCIS, M.B., B.S., 1924 (Univ. Melbourne), Melbourne Hospital.

THE undermentioned has been elected a member of the Queensland Branch of the British Medical Association:

BOURKE, ISODORE MCWILLIAM, M.R.C.S. (Eng.), L.R.C.P. (Lond.), D.P.H. (Lond.), Townsville.

THE undermentioned has been elected a member of the South Australian Branch of the British Medical Association:

DOWLING, DONALD AUGUSTUS, M.B., B.S., 1923 (Univ. Adelaide), Adelaide.

Obituary.

EDWARD HENRY EMBLEY.

IT is a matter of regret that distance renders impossible an immediate tribute in these pages from the pen of Dr. C. J. Martin to the memory of his friend and disciple, Dr. E. H. Embley, who has recently passed away. Though my relations were not so intimate, yet I was privileged to be brought into close association with him, for he worked in my laboratory quite a number of years and I was able

to make some estimate of his fine qualities of mind and heart.

Edward Henry Embley, like many eminent Victorians, was born in Castlemaine, the date being 1861. He received his primary education in his native town, but went to the Bendigo High School for his secondary training. Then after matriculation in the University of Melbourne, in 1884, came the study of medicine which closed with the M.B., B.S. degrees in 1889. From an early period of his medical practice in Latrobe Street, Melbourne, he displayed a keen interest in the subject of anæsthetics and a thesis on this topic gained the degree of M.D. in 1901. When the David Syme prize was instituted as a recognition of the best research work in science conducted in the previous two years in Australia, Dr. Embley was the first to carry off this coveted distinction (1906). For many years he was Honorary Anæsthetist to the Melbourne Hospital and when in 1917 he resigned from this position he was made Consulting Anæsthetist, a position which he held until his death.

Ill-health necessitated his retirement from practice in 1920 and the remaining four years of his life witnessed the tragedy of steadily advancing disease which he bore with unconquerable serenity of mind. He died on May 9, 1924.

An appreciation of Embley based solely on his published works would miss a very integral part of his character and message. He was one of the kindliest of men. No one ever heard a word of bitter criticism directed against a colleague or anyone else. He was a man of high integrity of character —"straight as a die," as his medical friends would say of him. Once he admitted me into his confidence and told the story of his early struggles and of a great difficulty which had confronted him. He had to choose between a course of strict honour which meant heavy financial loss necessitating a fresh start in the building up of a competence and just the least little divergence from rectitude which could have retained a modest fortune. Had he taken the latter course he would have been no worse than many business men who came through the same crisis and now carry their heads high in air. His decision to retain an unsoiled conscience was embittered by the recollection of a precisely similar alternative being forced upon his father entailing much struggle and some hardship to the family when the course of strict honour was accepted as the only one possible.

To me Embley was always the type of the born man of science. The blacksmith's shop could not stifle the genius of Faraday; neither could the exacting duties of a profession which to him was a high calling as well as a livelihood, prevent Embley from being an inquirer and an experimenter. The four prime qualities of the man of science were strongly shown in him—courage, imagination, accuracy, persistence. I never saw these better displayed than in one of his few failures. He was endeavouring to find some quick, reliable method of determining the concentration of chloroform in blood and had decided to use the vapour presure. This meant, of course, fixing the oxygen and carbon dioxide which would otherwise be liberated at reduced pressures. Then out of odd bits of glass tubing, spare taps and pieces of a broken Toepler pump, he built up a beautiful tensimeter in a windowed thermostat which gave the vapour pressure of liquids with accuracy. Alas, the small amounts of chloroform and the disturbance due to dissolved nitrogen rendered the method useless. How many Sundays were devoted to this long inquiry and how many patients remained unvisited I cannot guess.

Another episode dwells in my memory. Embley was investigating the action of anæsthesia on the peripheral circulation and was using a bowel plethysmograph. In the course of a friendly argument I advanced the criticism that he was not allowing for gravity and to prove his point he ought to have the animal prone with the plethysmograph pointing downwards. Next day I found Embley at work with animal and apparatus upside down and pointing proudly to his positive result.

Embley's greatest achievement was, of course, his investigation on the causation of death during chloroform administration, a description of which appeared in *The British Medical Journal*, of April 5, 12 and 19, 1902. As with all reformers one must contrast the state of knowledge before he appeared on the scene with that due to his teaching. The many deaths which took place on the operating table and directly attributable to the anæsthetic, gave surgeons of a generation ago much uneasiness of mind and bred an anxiety amongst the lay public which has not yet subsided. A number of investigators, English, Scotch and French, attacked the problem and arrived at varying and discordant conclusions. The Glasgow Committee which reported in 1880 and the physiologist MacWilliam, of Aberdeen, came to a number of conclusions which the Hyderabad Commission opposed, but which have since been vindicated. A Committee of the British Medical Association, appointed in 1891, based their investigation on clinical evidence alone and reported in 1900—one of the most futile documents ever presented to the profession. Apart from emphasizing the greater toxicity of chloroform than that of ether and drawing some obvious deductions as to post-anæsthetic vomiting and bronchitis, the general conclusion arrived at was that "the most important factor in the safe administration of anæsthetics is the experience acquired by the administrator"! In 1888 and 1889 the Nizam, of Hyderabad, with enlightened vision appointed a Commission for the investigation of the problem. Some medical men of note came from Britain, but not a single physiologist, be it recorded. Its beautifully bound report was issued in 1891. The conclusions embodied in this report are certainly remarkable. Failure of respiration is the only means by which the heart's safety is jeopardized; the heart never stops before respiration; vagus action on the heart is beneficial, preventing a too great distribution of the chloroform; chloroform does not directly injure the heart substance; the fall of blood pres-

sure during anæsthesia is beneficial to the heart; the Glasgow Committee used faulty methods and ascribed to chloroform what was due to asphyxia. Now each of these conclusions is not only wrong, but wholly wrong. How much of the blame is to be ascribed to the climate and how much to illness is hard to apportion, but lack of scientific training must surely be the chief factor. Yet I have heard of the Hyderabad Commission being quoted as proving the danger of importing the lore of the physiological laboratory (*sic*) into the operating theatre.

Embley was convinced from his experience that the Commission was wrong, so he set himself, dedicated himself, I might say, to a laborious, scientific inquiry into the whole problem. Fortunately a physiological laboratory was available and he had the advice of a master physiologist, Dr. C. J. Martin. The conclusions arising from this great work were made public in 1902 and the Hyderabad Commission received its death blow. To have countered this Commission and defeated it in detail was a great performance for a single investigator who had only broken time to give to the laboratory. Embley showed that heart muscle is very sensitive to chloroform poisoning, that this drug raises the excitability of the vagus, that deaths in the induction stage of anæsthesia (which the Hyderabad Commission ignored) are syncopal and unconcerned with respiration, that failure of respiration is mainly due to fall of blood pressure and that in the post-indication stages of anæsthesia there is a general depression of all activities and no longer syncope through excited vagus action. The chief practical outcome of this work was the advocacy of the use of weak chloroform concentrations in the induction stage when syncope is likely. The only important point which he may be said to have missed was the fibrillation of the heart caused by deep chloroform poisoning.

Embley's claim to the gratitude of mankind is based chiefly on his work on chloroform. But he by no means ceased to be an investigator; indeed he often said he was only at the opening chapter of the story. A paper written in conjunction with Professor C. J. Martin and published in *The Journal of Physiology* (Volume XXXII., 1905), cleared up some discrepancies in the accounts of the action of chloroform on the arterioles and showed that with the concentrations in the blood that would occur from inhalation, vaso-dilatation is the only vascular response. Further papers on ethyl chloride and on ether followed. In his last researches the difficulties were much greater and it may be said that he attempted single-handed what no one person could achieve; yet in all of them the true spirit of the investigator is manifest.

Had Embley not been devoted to his medical and physiological work I am convinced he would have gained success as a technical chemist. He had a singularly sure instinct where chemical practice was concerned. Witness his work on the absorption of ether by strong sulphuric acid and the subsequent liberation of pure ether on dilution with water, a method of preparation that has not, I believe, been improved upon. Embley's fine scientific mind was appreciated perhaps only by the few who witnessed or followed his experimental work; his professional brethren respected him as a cautious and skilful anæsthetist and a man who upheld the highest ethical traditions of the profesion, whilst his patients and friends loved him for his gentleness and true nobility. His home life was very happy and to his widow and two daughters our sympathy will be extended.

W. A. OSBORNE.

Correspondence.

THE TEACHING OF OBSTETRICS.

SIR: I read your leader in THE MEDICAL JOURNAL OF AUSTRALIA of June 21, 1924, with intense interest. As a result of personal experience in obstetrics and having recently seen some work in England and on the Continent, I can support your remarks almost word for word. During my travels in 1922 to the different centres and while visiting various hospitals, I found that the subject of obstetrics was attaining a position quite on a plane with surgery and medicine. A very powerful wave of unrest among the teachers in obstetrics was observable because, if any reliance can be placed on statistics, it appeared that the mortality and morbidity in that branch apparently had not benefited by the principles of Listerism to the same extent as had surgery. Gynæcology owes much indeed to Listerism and asepsis, but the mortality during the puerperium had been very slightly, if at all diminished during the last decade.

Obstetricians have been searching their hearts and their teaching methods to find the true causes of this mortality, which in Great Britain and Australia had become a matter of deep national concern. In the new Maternity Hospital at Lausanne in Switzerland the intensity and fervour of the teaching and demonstrations in obstetrics and the exposition of the methods for dealing with eclamspia (suggested by Strogonof, of Petrograd) were drawing the attention of observers from all over the world.[1] In Paris I met several students and nurses who had come from England and Scotland to learn obstetrics in La Pitié, which had been re-modelled in 1915 and contained a modernized obstetrical unit. In all the great London metropolitan hospitals there was a recognizable re-awakening in obstetric thought and teaching. And in Australia, especially in Sydney, and in various articles published during the last two years in your journal and by your leader of last week, evidence is clear that the spirit has stirred here also.

Now what does it all point to? Surely all thoughtful practitioners can now see the futility of the older methods whereby a student is compelled to hold certificates merely showing that he has personally conducted twenty labours and even that minimum we know is often done for him by a nurse, possibly in his presence. If it be true—and I do not think it can be gainsaid—that successful teaching in ante-natal work and obstetrics are the foundations of the health of the nation, surely we as a profession should demand that the portal of admission to the right of practising obstetrics should be more strictly guarded.

My own view after mature thought is that there should be for the whole of Australia only one Board of Examiners in Obstetrics, with representatives from each University on that Board, which should be styled "The College of Obstetrics in Australia," granting (by charter) a degree commensurate with the dignity and importance of the subject and of a standard as high as the F.R.C.S. (England). I would suggest that this examination could be held once in six months alternately in the different capitals. Further, that each student before he be allowed to pass the qualifying examination, be compelled to attend the practice of a large maternity and ante-natal clinic for at least four months and for a higher degree at least six months.

And just as much as no surgeon would nowadays be promoted to the operating staff of a large hospital unless he possessed one of the highest surgical qualifications, so no man should be allowed to teach obstetrics and ante-natal study until he had obtained the highest qualifications.

In Melbourne and perhaps in Sydney and in Adelaide it should be possible to establish chairs for obstetrics only, but to include ante-natal work; with a whole-time professor who should be a man (or a lady, as Profesor Dr. Louise McIlroy) between thirty and forty years of age, whose salary should be at least £2,000 a year, without the right of private practice, but permitted to meet practitioners in consultation, should they desire on two afternoons a week. The appointment should be for five years, with the right of re-applying if he wished. If it be said that the funds at present in the hands of either of these Universities would not permit of a whole-time professor being appointed, then surely we could urge upon the Governments (Federal and State) and upon the generosity of the large philanthropic trusts the national value of this work. It is of cardinal importance that the teacher should be an enthusiast in his work with the driving force and ambition necessary to make the position one of pre-

[1] See the report of the visit of a London surgical unit to Lausanne in 1922, showing the exceptionally fine quality of the work and teaching done there, published in *The British Medical Journal*, June 2, 1923, page 937.

eminence in the community. This was the case in the days of Simpson in Edinburgh, Matthews Duncan in London and at present holds in Paris, Geneva, Lausanne and other large cities on the Continent. It will be noticed that for the purpose of teaching. I am absolutely sure that gynæcology should be divorced from obstetrics, but at the same time, the more the medical practitioner realizes the importance of sound obstetrics and the rigidity of its asepsis, the more surely will there be less gynæcology to perform.

We do not want new buildings nor new clinics. The Federal Government will probably institute small maternity clinics in various country towns. I take it that the Women's Hospital here, or the Alfred Hospital or the Queen Victoria Hospital will gladly grant the use of their wards and ante-natal clinics to the professor, so that the money could be entirely devoted to the one object, namely the very best teaching obtainable in obstetrics. There are men among us who can point with pride to over twenty years' suburban practice and much obstetric work without a single fatality. They are the very men who realize that the great part of their reward is not in enlarged fees or remunerative operations, but in the satisfaction felt by doing work of national importance. Some details could be further considered by Committees of the various Branches of the British Medical Association in Australia.

Yours, etc.,

J. W. DUNBAR HOOPER.

12, Collins Street, Melbourne,
June 24, 1924.

THE TREATMENT OF FRACTURES.

SIR: It is pleasant to see the above commonplace subject again under notice at this time to the dignity of being a subject for a leading article.

The experience of those surgeons who were fortunate enough to go on active service during the war, revived interest in the subject temporarily, but matters connected with operative surgery seem more attractive lately. When the much debated question of bed allotment to assistants came up for discussion on one occasion at a staff meeting of the Sydney Hospital and a few surgical beds were reluctantly granted to the assistants, the latter were insistent that fractures should not occupy their beds, as if the good result obtained by care and skill in treating a broken limb is not good surgical service. It is certainly good social service in restoring a useful unit to the industrial community, a result which does not follow treatment of many obscure abdominal cases and genito-urinary disorders. Many such cases never escape from invalidism, yet after operations for their relief the embryo surgeon soul pants as the "hart for the water brooks."

I am told that in the last final examination more than one candidate was not clear as to the identity of a Thomas's splint.

Former colleagues will remember similar views having been expressed when "in the thing" which will exonerate me from the appellation of an "arm chair" or "wheel chair" critic.

Yours, etc.,

E. H. BINNEY.

Coast Hospital, New South Wales,
May 16, 1924.

Medical Appointments.

DR. JOHN BOSTOCK (B.M.A.) has been appointed Senior Medical Officer, Department of Mental Hospitals, New South Wales.

* * * *

DR. A. H. CROWLEY (B.M.A.) has been appointed Government Medical Officer at Toogoolawah, Queensland.

Medical Appointments Vacant, etc.

FOR announcements of medical appointments vacant, assistants, *locum tenentes* sought, etc., see "Advertiser," page xviii..

UNIVERSITY OF MELBOURNE: Chair of Pathology.

Medical Appointments: Important Notice.

MEDICAL practitioners are requested not to apply for any appointment referred to in the following table, without having first communicated with the Honorary Secretary of the Branch named in the first column, or with the Medical Secretary of the British Medical Association, 429, Strand, London, W.C..

BRANCH.	APPOINTMENTS.
NEW SOUTH WALES: Honorary Secretary, 30 - 34, Elizabeth Street, Sydney.	Australian Natives' Association. Ashfield and District Friendly Societies' Dispensary. Balmain United Friendly Societies' Dispensary. Friendly Society Lodges at Casino. Leichhardt and Petersham Dispensary. Manchester Unity Oddfellows' Medical Institute, Elizabeth Street, Sydney. Marrickville United Friendly Societies' Dispensary. North Sydney United Friendly Societies. People's Prudential Benefit Society. Phœnix Mutual Provident Society.
VICTORIA: Honorary Secretary, Medical Society Hall, East Melbourne.	All Institutes or Medical Dispensaries. Australian Prudential Association Proprietary, Limited Mutual National Provident Club. National Provident Association.
QUEENSLAND: Honorary Secretary, B.M.A. Building, Adelaide Street, Brisbane.	Brisbane United Friendly Society Institute. Stannary Hills Hospital.
SOUTH AUSTRALIA: Honorary Secretary, 12, North Terrace, Adelaide.	Contract Practice Appointments at Renmark. Contract Practice Appointments in South Australia.
WESTERN AUSTRALIA: Honorary Secretary, Saint George's Terrace, Perth.	All Contract Practice Appointments in Western Australia.
NEW ZEALAND (WELLINGTON DIVISION): Honorary Secretary, Wellington.	Friendly Society Lodges, Wellington, New Zealand.

Diary for the Month.

JULY 15.—New South Wales Branch, B.M.A.: Executive and Finance Committee.
JULY 16.—Victorian Branch, B.M.A.: Council.
JULY 16.—Western Australian Branch, B.M.A.: Branch.
JULY 18.—Eastern Suburbs Medical Association, New South Wales.
JULY 22.—New South Wales Branch, B.M.A.: Medical Politics Committee: Organization and Science Committee.
JULY 24.—New South Wales Branch, B.M.A.: Branch.
JULY 25.—Queensland Branch, B.M.A.: Council.
JULY 31.—South Australian Branch, B.M.A.: Branch.
AUG. 1.—Queensland Branch, B.M.A.: Branch.
AUG. 6.—Victorian Branch, B.M.A.: Branch.
AUG. 8.—Queensland Branch, B.M.A.: Council.
AUG. 8.—South Australian Branch, B.M.A.: Council.
AUG. 12.—New South Wales Branch, B.M.A.: Ethics Committee.
AUG. 13.—Tasmanian Branch, B.M.A.: Branch.
AUG. 13.—Melbourne Pædiatric Society.
AUG. 13.—Central Northern Medical Association, New South Wales.
AUG. 14.—New South Wales Branch, B.M.A.: Clinical Meeting.
AUG. 14.—Brisbane Hospital for Sick Children: Clinical Meeting.

Editorial Notices.

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